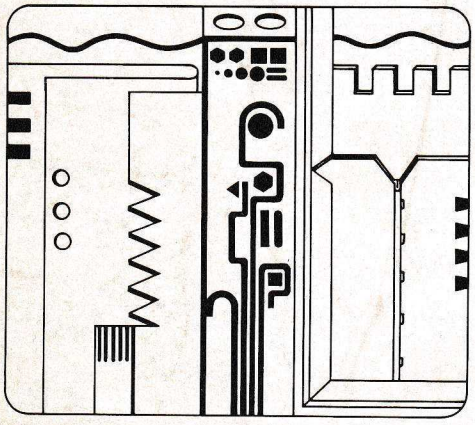
metalworking tools / catalog 70a

ROPER WHITNEY



ROPER WHITNEY, INC.

The RW symbol is new; it signals another milestone in the corporate life and times of Whitney Metal Tool Company. For over half a century, Whitney Metal Tool Company, under the banner of Whitney-Jensen, developed and manufactured tools to shape the myriad forms in metal demanded by modern technology.

Although Whitney Metal Tool Company was purchased by Roper Industries in 1961, no particular recognition of this was evident in the corporate public posture of either firm. The old name had persisted since 1912 when the company was first incorporated by William A. Whitney. The principle product at the time was the No. 20 Ball Bearing Screw Punch and related punches and dies.

By contrast, Roper Whitney, Inc. manufactures hundreds of tool lines and thousands of interrelated dies and accessories. Despite this proliferation of product lines and models — outlined at the right — the company growth stayed within the manufacture of simple, powerful hand and manual tools. This is still the image Roper Whitney desires to project today. Even our power tools, of which there are many, represent the use of power to augment that of the hand tool and to impart great strength, so to speak, to a single man. Roper Whitney tools essentially, shear one cut, punch one hole, or bend one sheet at a time.

The steady development of the company was in large part due to the close relationship fostered between management and the employees. This partners-in-progress attitude persists today and is reflected in

J. H. MAKEMSON
President, Board Chairman

JOSEPH TANAGLIA
Executive Vice-President

HAROLD PEDERSEN
Treasurer

GERALD PLUMB
Sales Manager

EUGENE REBECCA
Assistant Sales Manager

many design phases of the modern building we now occupy. In so far as it is possible, Roper Whitney has sought a close working relationship with its customers and its business community. The men pictured are skilled in the various facets of metal-working. In addition, through their long experience, they are variously skilled in many additional facets and, in aggregate, form an impressive pool of talent that you might tap to advance your production needs. They are genuinely interested in helping anyone save time and money, and become more proficient in the use of Roper Whitney tools. They invite you to call on them at any time.

Under our bold new RW symbol you get the same high quality manufacture, the same business integrity, and the same desire to help which characterized our company in the past. Depend on it.

WAYNE RECK
Assistant Sales Manager

LOREN HEDMAN
Advertising Manager

LESLIE BURGETT
Chief Engineer

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Complete information on Roper Whitney punch presses, press brake, bending brakes, power squaring shears, throatless shears, hydraulic punch, power notcher and hydraulic angle iron shear.

selecting a punch or press

There are many individual reasons which influence punch selection in addition to the basic reasons. You might choose hand, bench or foot pedal operation, a reversible handle, or decide on space needed for the tool in your shop, portable or stationary operation. Your work piece might have a shape or size which demands a specific tool or even a special tool.

Here are basic considerations for maximum range of job uses:

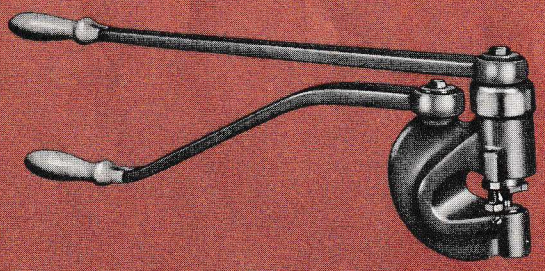
Tons of punching power tool is rated for.

Capacity (maximum hole size thru specified thickness of mild steel).

Operation action (vertical lever, horizontal turn, hand grip, foot pedal).

Throat size (depth and height, configuration).

Number of holes per job.



No. 10 Punch, page 10, can be used to apply the basic selection factors. No. 10 has 7 tons of punching power, a capacity of 3/8" holes in 1/4" mild steel. The shapes and sizes of punches and dies it will accept are shown on page 11. The throat depth is 1-1/2" with a 3/8" space between punch & die, throat height is 1". No. 10 punches with one complete turn of a 19-1/2" handle, but a ratchet handle is optional for confined operating areas. Although its ball bearing screw principle is smooth and powerful, the tool is at its best for a relatively small number of holes per job.

HOW TO DETERMINE PUNCHING PRESSURE REQUIRED

Table "A" lists pressures for round holes in mild steel. Select hole size at top of Table "A" and metal thickness at side. The number in the square where the two lines meet is the tonnage required for mild steel. This table provides a quick reference to determine whether or not a specific tool has the capacity to punch a specific round hole size in mild steel.

HOW TO FIGURE TONNAGE NEEDED FOR OTHER HOLE SHAPES & SIZES IN OTHER METALS

The punching pressure needed for other hole sizes and hole shapes in various metals can be determined as follows:

Multiply hole circumference (Table "B") *times* metal thickness *times* tensile strength tonnage of metal (Table "C").

Example: To punch a 3/8" dia. hole thru 1/4" SAE 1095 C.R. annealed spring steel . . . multiply 1.18" circ. x .250" thickness x 50 tons tensile strength = 14.75 tons.

Punching pressure can be greatly reduced by adding shear to the punch or die. To be most effective, the amount of shear should equal or exceed the thickness of material being punched.

table a

PRESSURES REQUIRED TO PUNCH ROUND HOLES IN MILD STEEL

HOLE DIAMETER		1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Ga.	In.	PRESSURE IN TONS														
20	.036"	.4	.5	.7	.9	1.1	1.2	1.4	1.6	1.8	1.9	2.1	2.3	2.5	2.6	2.8
18	.048"	.5	.7	.9	1.2	1.4	1.6	1.9	2.1	2.4	2.6	2.8	3.1	3.3	3.5	3.8
16	.062"	.6	.9	1.2	1.5	1.8	2.1	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.4	4.7
14	.075"	.7	1.1	1.5	1.8	2.2	2.6	2.9	3.3	3.7	4.0	4.4	4.8	5.1	5.5	5.9
12	.105"	1.0	1.5	2.1	2.6	3.1	3.6	4.1	4.6	5.1	5.7	6.2	6.7	7.2	7.7	8.2
11	.120"	1.2	1.8	2.4	2.9	3.5	4.1	4.7	5.1	5.9	6.2	7.1	7.6	8.3	8.8	9.4
10	.135"	1.3	2.0	2.6	3.3	4.0	4.6	5.3	5.9	6.6	7.3	7.9	8.6	9.2	9.9	10.6
5/32"	.156"		2.3	3.1	3.8	4.6	5.4	6.1	6.9	7.7	8.4	9.2	10.0	10.7	11.5	12.3
3/16"	.188"		2.8	3.7	4.6	5.5	6.4	7.4	8.3	9.2	10.1	11.0	12.0	12.9	13.8	14.8
1/4"	.250"			4.9	6.1	7.4	8.6	9.8	11.1	12.3	13.5	14.7	16.0	17.2	18.4	19.7
3/8"	.375"					11.1	12.8	14.8	16.5	18.5	20.2	22.1	23.8	25.8	27.5	29.5
1/2"	.500"							19.7	22.0	24.6	26.9	29.5	31.8	34.4	36.8	39.4

The diameter of the punch must at least equal the thickness of the metal to be punched.

selecting a punch or press

table b

DECIMAL EQUIVALENTS CIRCLES, CIRCUMFERENCES AND AREAS

DIA. IN.	DECIMAL EQUIV.	CIRCUM. IN.	AREA SQ. IN.
1/64	.015625	.0491	.00019
1/32	.03125	.0982	.00077
3/64	.046875	.1473	.00173
1/16	.0625	.1963	.00307
5/64	.071825	.2455	.00479
3/32	.09375	.2945	.00690
7/64	.109375	.3436	.00940
1/8	.125	.3927	.01228
9/64	.140625	.4418	.01553
5/32	.15625	.4909	.01916
11/64	.171875	.5400	.02321
3/16	.1875	.5890	.02761
13/64	.203125	.6381	.03241
7/32	.21875	.6872	.03758
15/64	.234375	.7363	.04314
1/4	.250	.7854	.04909
17/64	.265625	.8345	.05541
9/32	.28125	.8836	.06213
19/64	.296875	.9327	.06922
5/16	.3125	.9817	.07670
21/64	.328125	1.0309	.08456
11/32	.34375	1.0799	.09281
23/64	.359375	1.1291	.10144
3/8	.375	1.1781	.11045
25/64	.390625	1.2273	.11985
13/32	.40625	1.2763	.12962
27/64	.421875	1.3254	.13979
7/16	.4375	1.3744	.15033
29/64	.453125	1.4236	.16126
15/32	.46875	1.4726	.17257
31/64	.484375	1.5218	.18427
1/2	.500	1.5708	.19635
33/64	.515625	1.6199	.20880
17/32	.53125	1.6690	.22166
35/64	.546875	1.7181	.23489
9/16	.5625	1.7671	.24850
37/64	.578125	1.8163	.26248
19/32	.59375	1.8653	.27688
39/64	.609375	1.9145	.29164
5/8	.625	1.9635	.30680
41/64	.640625	2.0127	.32232
21/32	.65625	2.0617	.33824
43/64	.671875	2.1108	.35453
11/16	.6875	2.1598	.37122
45/64	.703125	2.2090	.38828
23/32	.71875	2.2580	.40574
47/64	.734375	2.3072	.42356
3/4	.750	2.3562	.44179
49/64	.765625	2.4054	.46041
25/32	.78125	2.4544	.47937
51/64	.796875	2.5036	.49872
13/16	.8125	2.5525	.51849
53/64	.828125	2.6017	.53862
27/32	.84375	2.6507	.55914
55/64	.859375	2.6999	.58003
7/8	.875	2.7489	.60132
57/64	.890625	2.7981	.62298
29/32	.90625	2.8471	.64504
59/64	.921875	2.8693	.66746
15/16	.9375	2.9452	.69029
61/64	.953125	2.9945	.71349
31/32	.96875	3.0434	.73708
63/64	.984375	3.0923	.76097
1	1.000	3.1416	.7854
1- 3/32	1.09375	3.4362	.9396
1-1/8	1.125	3.5343	.9940
1-1/4	1.250	3.9270	1.2272
1-3/8	1.375	4.3197	1.4849
1-1/2	1.500	4.7124	1.7671
1-5/8	1.625	5.1051	2.0739
1-3/4	1.750	5.4978	2.4053

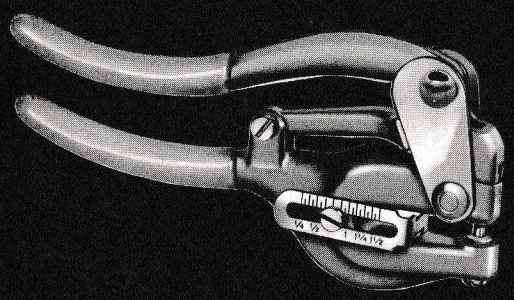
table c

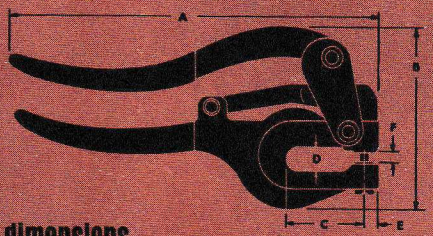
MATERIAL DESCRIPTION	HARDNESS	TENSILE (TONS)
STEELS		
Low Carbon, H. R. Sheet ASTM A-415	Rb 70	30
Low Carbon, C. R. Sheet Special Killed Drawing Quality	Rb 50	25
Low Carbon, C. R. Sheet		
Soft	Rb 45-60	26.5
1/4 Hard	Rb 60-75	30
1/2 Hard	Rb 70-85	36
Hard	Rb 80-95	46
.40—.50% Carbon Steel H. R. Sheet	BHN 200	50
SAE 1074 C. R. Annealed Spring Steel	Rb 90	42.5
SAE 1095 C. R. Annealed Spring Steel	Rb 95	50
SAE 1074 or 1095 Spring Steel Hardened to Spring Temper	Rc 45-50	130
Abrasion—Resisting H. R. Steel Sheet	BHN 200/245	60
Cor-Ten Steel	BHN 140	35
Tri-Ten Steel	BHN 120	30
T-1 Steel Types A & B 100,000 P.S.I.Y.S.	BHN 260	65
STAINLESS STEELS		
202—Annealed	Rb 95	55
302, 303, 304—Annealed	Rb 85	47.5
310—Annealed	Rb 90	52.5
316, 321, 430—Annealed	Rb 90	47.5
410—Annealed	Rb 85	42.5
ALUMINUM BASE*		
Alloy—Temper		
1100—0	BHN 23	6.5
—H14	BHN 32	9
2024—0	BHN 47	13.5
—T3	BHN 120	35
3003—0	BHN 28	8
—H14	BHN 40	11
—H16	BHN 47	13
3105—H25	BHN 47	13
5005—H34	BHN 41	11.5
5052—0	BHN 47	14
5052—H32	BHN 60	16.5
6061—0	BHN 30	9
—T6	BHN 95	22.5
7075—0	BHN 60	16.5
—T6	BHN 150	41.5
COPPER BASE		
**Alloy—Temper		
110—Electrolytic Tough Pitch Copper		
—.050mm G.S.	Rf 40	16
—1/2 Hard	Rb 40	21
—Hard	Rb 50	25
220 Comm. Bronze, 90%		
—1/2 Hard	Rb 58	26
230 Red Brass, 85%—1/4 Hard	Rb 55	25
260 Cartridge Brass, 70%		
—.035mm G.S.	Rf 68	24.5
—1/2 Hard	Rb 70	31
—Spring	Rb 91	47
280 Muntz Metal—1/8 Hard	Rb 55	30
342-A High Leaded Brass—1/2 Hard	Rb 70	30.5
675 Manganese Bronze, A		
—Soft Anneal	Rb 65	32.5
MISC. MATERIALS (METALLIC)		
Gold—14 Carat, Soft		29
Lead—		2.5
Silver—Sterling—Soft		18.5
—1/2 Hard		32.5
Tin—Block		2.5
Zinc—Drawing		10
Titanium—Unalloyed	Rc 23-29	30-55
Magnesium—AZ31B-F (Extruded)	BHN 46-49	18-19
Platinum (Annealed)	DPH 40	14-15

*500 Kg Load 10mm Ball
**Copper Development Association Co.

no. 5 jr.

1 TON PUNCHING POWER
1/4" HOLE THRU
16 GA. MILD STEEL





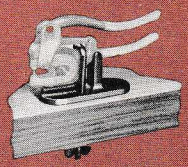
dimensions

A	8-1/4"	D	7/16"
B	3-3/4"	E	5/16"
C	1-3/4"	F	9/32"
METAL BOX	4-1/8" x 8-5/8"		

specifications

Weights: punch only 2-3/4 lbs., punch kit with metal box 4 lbs., punch kit with paper box 3 lbs., bench mount base 3/4 lbs.

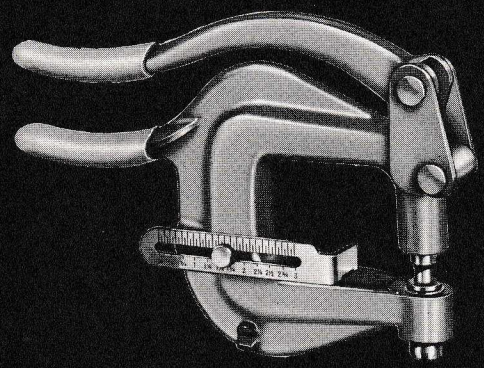
The No. 5 jr. can be purchased in a kit including: punch, metal box, one each 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 9/32" round punches and dies. Also available as same kit with paper box . . . or tool only with one 3/16" round punch and die.

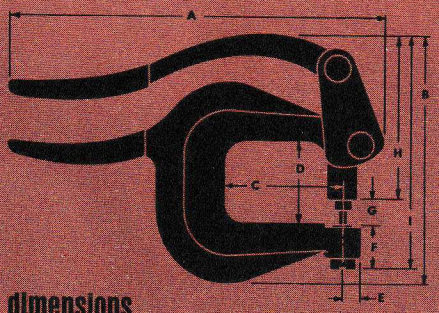


Bench mount base available for stationary use. Base swivels to any position. Punch is held by an L-shaped clamp rod through a 7/16" or larger hole in bench.

no. XX

1 TON PUNCHING POWER
1/4" HOLE THRU
16 GA. MILD STEEL
LARGE THROAT OPENING



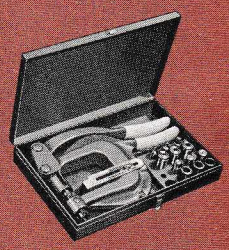


dimensions

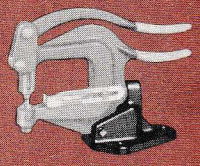
A	10-1/4"	F	1-3/8"
B	6-3/8"	G	9/16"
C	3-1/4"	H	4-1/16"
D	2-1/8"	I	6"
E	9/16"		
METAL BOX	6-5/8" x 10-1/2"		

specifications

Weights: punch only 6 lbs., punch kit with metal box 9-1/2 lbs., bench mount base 1-1/8 lbs.



The No. XX can be purchased in a kit including: punch, metal box, one each 5/32", 7/32", 9/32", 11/32", 13/32", 15/32", 17/32" round punches and dies. Also available . . . tool only and one 9/32" round punch and die.



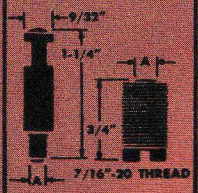
Bench mount base available for stationary use.

These versatile hand punches handle round and irregular shaped punching as well as button, snap lock and countersinking operations. Both have same punching capacity — the No. xx having larger throat size.

hand operated punches

No. 5 Jr. Punch

Kit w/Metal Box	$14.85
Kit w/Paper Box	14.30
Only	12.10
Bench Mount Base	4.13



Standard Round Punches & Dies

No. 5 Punch	No. 5 Die
(A)	(A)
1/16"	3/16"
5/64"	13/64"
3/32"	7/32"
7/64"	15/64"
1/8"	1/4"
9/64"	17/64"
5/32"	9/32"
11/64"	

Punch $.55 Ea.
Die $.55 Ea.

Drill Size Punches & Dies

Drill Sizes No. 52 thru K
Punch $.83 Ea.
Die $.83 Ea.

IRREGULAR SHAPED PUNCHES & DIES

Type M	Type N	Type P	Type R	Type S	Type T
(A) (B)	(A) (B)	(A) (B)	(A)	(A)	(A)
1/4 1/8	3/16 1/8	9/32 1/8	1/8	7/32	7/32
9/32 1/8	7/32 1/8		5/32		
	15/64 1/8		3/16		
PUNCH $5.50 EA. DIE $5.50 EA.	PUNCH $5.50 EA. DIE $5.50 EA.	PUNCH $5.50 EA. DIE $5.50 EA.	PUNCH $5.50 EA. DIE $5.50 EA.	PUNCH $5.50 EA. DIE $5.50 EA.	PUNCH $5.50 EA. DIE $5.50 EA.

Countersinking Punches & Dies

For 100° Rivet

(A)
3/32
1/8
5/32

PRICE PER SET $5.50

Snap Lock Punches & Dies

Cap. 16 ga.

PRICE PER SET $5.50

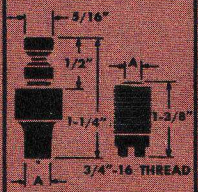
Button Punches & Dies

Cap. 3 Thicknesses of 22 ga.

PRICE PER SET $3.30

No. XX Punch

Kit w/Metal Box	$39.33
Only	29.70
Bench Mount Base	6.05



Standard Round Punches & Dies

No. XX Punch	No. 7 Die
(A)	(A)
1/16"	5/16"
5/64"	21/64"
3/32"	11/32"
7/64"	23/64"
1/8"	3/8"
9/64"	25/64"
5/32"	13/32"
11/64"	27/64"
3/16"	7/16"
13/64"	29/64"
7/32"	15/32"
15/64"	31/64"
1/4"	1/2"
17/64"	33/64"
9/32"	17/32"
19/64"	

Punch $.94 Ea.
Die $.94 Ea.

Style "D"
.350 x .375
Punch $8.47 Ea.
Die $6.05 Ea.

Drill Size Punches & Dies

Drill Sizes No. 52 thru Z
Punch $1.21 Ea.
Die $1.21 Ea.

IRREGULAR SHAPED PUNCHES & DIES

Type M	Type N	Type P	Type R	Type S	Type T
(A) (B)	(A) (B)	(A) (B)	(A)	(A)	(A)
7/16 1/4	11/32 1/4	7/16 1/4	17/64	3/8	3/8
PUNCH $8.47 EA. DIE $6.05 EA.	PUNCH $7.26 EA. DIE $6.05 EA.	PUNCH $8.47 EA. DIE $6.05 EA.	PUNCH $6.05 EA. DIE $6.05 EA.	PUNCH $8.47 EA. DIE $6.05 EA.	PUNCH $8.47 EA. DIE $6.05 EA.

Countersinking Punches & Dies

For 100° Rivet

(A)
3/32
1/8
5/32

PRICE PER SET $8.85

Snap Lock Punches & Dies

Cap. 16 ga.

PRICE PER SET $6.05

Button Punches & Dies

Cap. 3 Thicknesses of 22 ga.

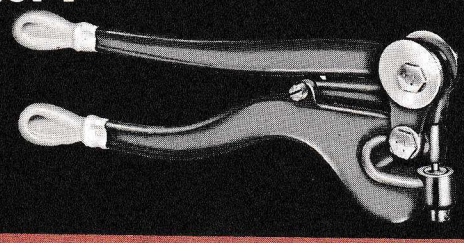
PRICE PER SET $3.63

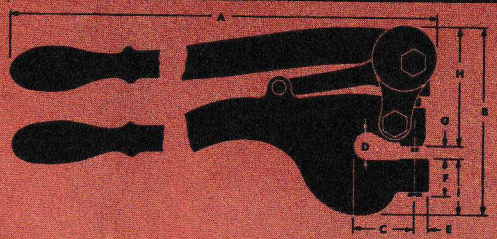
For any size not shown, add 25% to prices listed. If smallest dimension is less than 1/8", price quoted on application.

hand operated punches

no. 7

2-1/2 TONS PUNCHING POWER
1/4" HOLE THRU 1/8" MILD STEEL



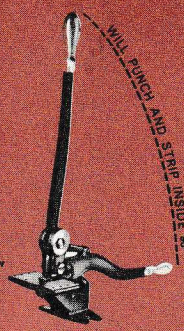


dimensions

A..18-1/2" D....5/8" G....1/4"
B...5-3/4" E....1/2" H..3-5/8"
C...1-5/8" F..1-1/4" I...1-7/8"
OVERALL WIDTH.....1-7/8"

specifications

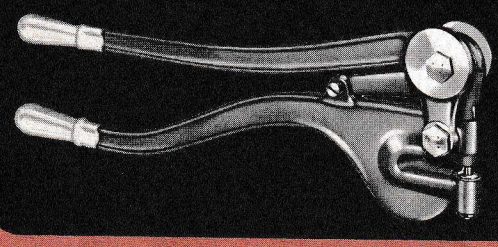
1 Ea. round 5/32", 7/32", 9/32" punches and dies furnished.
Weights: punch 7-1/2 lbs., bench mount base 5-1/2 lbs.

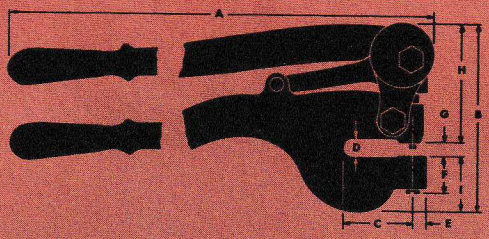


Factory reversed upper handle enables use with bench mount base. Base table is 3" x 5" with 10 tapped holes for stops.

no. 7½

3-1/2 TONS PUNCHING POWER
1/4" HOLE THRU 3/16" MILD STEEL



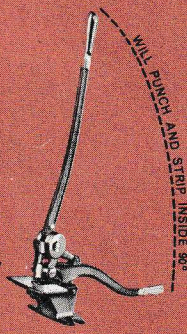


dimensions

A.....22" D....3/8" G....3/8"
B...6-3/4" E....1/2" H..4-1/2"
C...1-7/8" F..1-5/16" I.....2"
OVERALL WIDTH.....2-1/2"

specifications

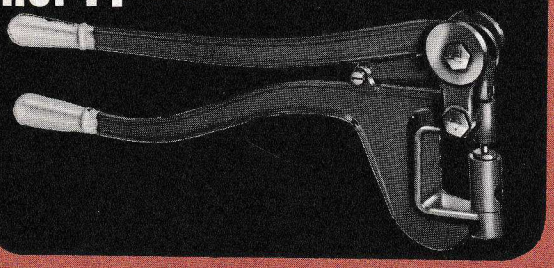
1 Ea. round 7/32", 9/32", 11/32" punches and dies furnished.
Weights: punch 10-1/2 lbs., bench mount base 6 lbs.

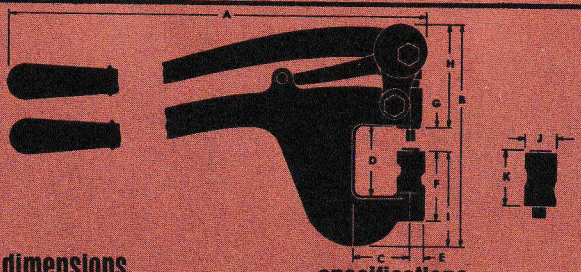


Factory reversed upper handle enables use with bench mount base. Base table is 3-1/2" x 5" with 8 tapped holes for stops.

no. 77

3 TONS PUNCHING POWER
5/16" HOLE THRU 1/8" MILD STEEL
DEEP THROAT



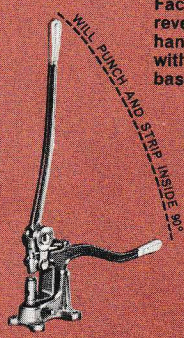


dimensions

A..22-1/2" E....5/8" I.....4"
B...8-3/4" F.....3" J..1-1/8"
C.....2" G....3/8" K.....2"
D...2-1/2" H..4-1/2"
OVERALL WIDTH.....2-1/2"

specifications

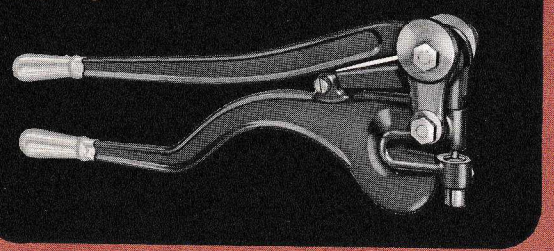
1 Ea. round 7/32", 9/32", 11/32" punches and dies furnished.
Weights: punch 12 lbs., bench mount base 6-1/4 lbs.

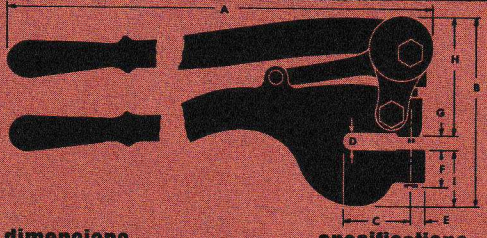


Factory reversed upper handle enables use with bench mount base.

no. 8

5 TONS PUNCHING POWER
1/4" HOLE THRU 1/4" MILD STEEL



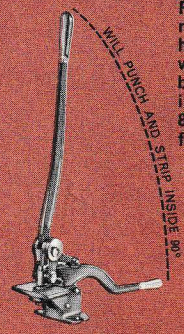


dimensions

A..25-1/2" D....1/2" G....3/8"
B.....8" E....5/8" H.....5"
C...2-1/8" F..1-5/8" I...2-5/8"
OVERALL WIDTH.....2-7/8"

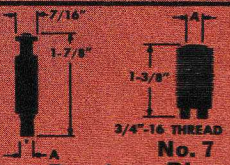
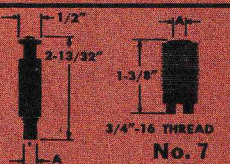
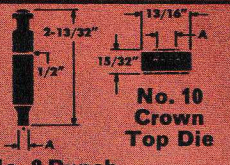
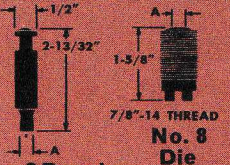
specifications

1 Ea. round 7/32", 9/32", 11/32" punches and dies furnished.
Weights: punch 17-1/2 lbs., bench mount base 8-1/2 lbs.



Factory reversed upper handle enables use with bench mount base. Base table is 3-3/4" x 5" with 8 tapped holes for stops.

roller bearing type

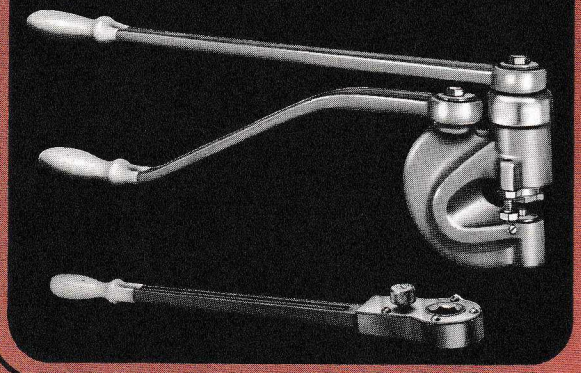
Net Prices F.O.B. Factory	Standard Round Punches & Dies	Drill Size Punches & Dies	IRREGULAR SHAPED PUNCHES & DIES						Button Punches & Dies
			Type M	Type N	Type P	Type R	Type S	Type T	
No. 7 Punch $30.25 No. 7 Bench Mount Base 12.10	 No. 7 Punch (A) (A) (A) (A) 1/16" 3/16" 19/64" 13/32" 5/64" 13/64" 5/16" 27/64" 3/32" 7/32" 21/64" 7/16" 7/64" 15/64" 11/32" 1/8" 1/4" 23/64" 9/64" 17/64" 3/8" 5/32" 9/32" 25/64" 11/64" Punch $.94 Ea. Die $.94 Ea.	Drill Sizes No. 52 thru Z Punch $1.21 Ea. Die $1.21 Ea.	(A) (B) 3/16 1/8 1/4 1/8 5/16 1/8 3/8 1/8 7/16 1/4 PUNCH $8.47 EA. DIE $6.05 EA.	(A) (B) 3/16 1/8 1/4 1/8 5/16 1/8 3/8 1/8 11/32 1/4 PUNCH $7.26 EA. DIE $6.05 EA.	(A) (B) 7/16 1/4 PUNCH $8.47 EA. DIE $6.05 EA.	(A) 1/8 3/16 1/4 17/64 PUNCH $6.05 EA. DIE $6.05 EA.	(A) 3/8 PUNCH $8.47 EA. DIE $6.05 EA.	(A) 3/8 PUNCH $8.47 EA. DIE $6.05 EA.	 Cap. 3 Thicknesses of 20 ga. PRICE PER SET $3.63
No. 7-1/2 Punch $36.30 No. 7-1/2 Bench Mount Base 13.20	 No. 8 Punch (A) (A) (A) (A) 1/16" 11/64" 9/32" 25/64" 5/64" 3/16" 19/64" 13/32" 3/32" 13/64" 5/16" 27/64" 7/64" 7/32" 21/64" 7/16" 1/8" 15/64" 11/32" 29/64" 9/64" 1/4" 23/64" 15/32" 5/32" 17/64" 3/8" 31/64" 1/2" Punch $1.21 Ea. Die $.94 Ea.	Drill Sizes No. 52 thru Z Punch $1.54 Ea. Die $1.21 Ea.	(A) (B) 3/16 1/8 1/4 1/8 5/16 1/8 3/8 1/8 7/16 1/4 PUNCH $8.47 EA. DIE $6.05 EA.	(A) (B) 3/16 1/8 1/4 1/8 5/16 1/8 3/8 1/8 11/32 1/4 PUNCH $7.26 EA. DIE $6.05 EA.	(A) (B) 7/16 1/4 PUNCH $8.47 EA. DIE $6.05 EA.	(A) 1/8 3/16 1/4 17/64 PUNCH $6.05 EA. DIE $6.05 EA.	(A) 3/8 PUNCH $8.47 EA. DIE $6.05 EA.	(A) 3/8 PUNCH $8.47 EA. DIE $6.05 EA.	 Cap. 3 Thicknesses of 20 ga. PRICE PER SET $3.63
No. 77 Punch $42.35 No. 77 Bench Mount Base 8.47	 No. 8 Punch (A) (A) (A) (A) 1/16" 3/16" 19/64" 13/32" 5/64" 13/64" 5/16" 27/64" 3/32" 7/32" 21/64" 7/16" 7/64" 15/64" 11/32" 29/64" 1/8" 1/4" 23/64" 15/32" 9/64" 17/64" 3/8" 31/64" 5/32" 9/32" 25/64" 1/2" 11/64" Punch $1.21 Ea. Die $.94 Ea.	Drill Sizes No. 52 thru Z Punch $1.54 Ea. Die $1.21 Ea.	(A) (B) 1/2 1/4 PUNCH $8.47 EA. DIE $6.38 EA.	(A) (B) 3/8 1/4 PUNCH $7.26 EA. DIE $6.05 EA.	(A) (B) 1/2 1/4 PUNCH $8.47 EA. DIE $6.38 EA.	(A) 11/32 PUNCH $6.05 EA. DIE $6.05 EA.	(A) 13/32 PUNCH $8.47 EA. DIE $6.38 EA.	(A) 13/32 PUNCH $8.47 EA. DIE $6.38 EA.	 Cap. 3 Thicknesses of 20 ga. PRICE PER SET $4.84
No. 8 Punch $42.35 No. 8 Bench Mount Base 14.52	 No. 8 Punch (A) (A) (A) (A) 1/16" 3/16" 19/64" 13/32" 5/64" 13/64" 5/16" 27/64" 3/32" 7/32" 21/64" 7/16" 7/64" 15/64" 11/32" 29/64" 1/8" 1/4" 23/64" 15/32" 9/64" 17/64" 3/8" 31/64" 5/32" 9/32" 25/64" 1/2" 11/64" Punch $1.21 Ea. Die $1.21 Ea.	Drill Sizes No. 52 thru Z Punch $1.54 Ea. Die $1.54 Ea.	(A) (B) 3/16 1/8 1/4 1/8 5/16 1/8 3/8 1/8 7/16 1/4 1/2 1/4 PUNCH $8.47 EA. DIE $6.05 EA.	(A) (B) 3/16 1/8 1/4 1/8 5/16 1/8 3/8 1/8 11/32 1/4 3/8 1/4 PUNCH $7.26 EA. DIE $6.05 EA.	(A) (B) 7/16 1/4 1/2 1/4 PUNCH $8.47 EA. DIE $6.05 EA.	(A) 1/8 3/16 1/4 17/64 11/32 PUNCH $6.05 EA. DIE $6.05 EA.	(A) 3/8 13/32 PUNCH $8.47 EA. DIE $6.05 EA.	(A) 3/8 13/32 PUNCH $8.47 EA. DIE $6.05 EA.	 Cap. 3 Thicknesses of 18 ga. PRICE PER SET $4.84

For any size not shown, add 25% to prices listed.
If smallest dimension is less than 1/8", price quoted on application.

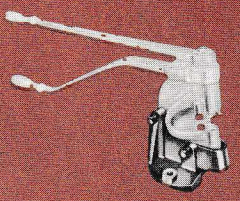
hand operated punches

no. 10

7 TONS PUNCHING POWER
3/8" HOLE THRU 1/4" MILD STEEL



A	19-1/2"	G	3-3/8"
B. spindle up,	6-3/4"	H	1-3/8"
spindle down,	6-1/4"	I	5-1/2"
C	1-1/2"	J	1-13/16"
D	5/8"	K	1-1/16"
E	3/8"	L	2-5/8"
F	1"		
SPACE BETWEEN PUNCH AND DIE	3/8"		
RATCHET HANDLE	2-3/8" x 19-1/4"		

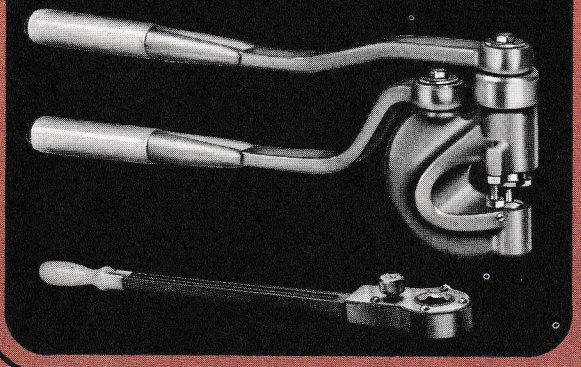


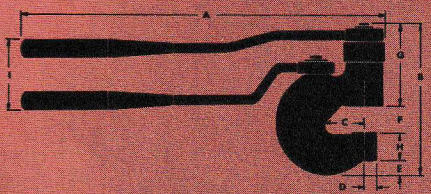
specifications

One 9/32" round punch and die furnished. Options: No. 113 ratchet handle, No. 10 bench mount base. Weights: punch 9 lbs., ratchet handle 3-1/2 lbs., bench mount base 4-1/2 lbs. NOTE: Punch will turn until it contacts the metal.

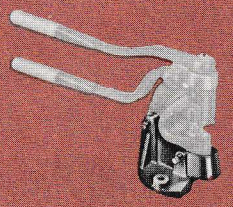
no. 11

7 TONS PUNCHING POWER
3/8" HOLE THRU 1/4" MILD STEEL
HANDLE HOLDS PUNCHES & DIES





A	17-3/4"	G	3-3/8"
B. spindle up,	6-3/4"	H	1-3/8"
spindle down,	6-1/4"	I	4-1/2"
C	1-1/2"	J	1-13/16"
D	5/8"	K	1-1/16"
E	3/8"	L	2-5/8"
F	1"		
SPACE BETWEEN PUNCH AND DIE	3/8"		
RATCHET HANDLE	2-3/8" x 19-1/4"		

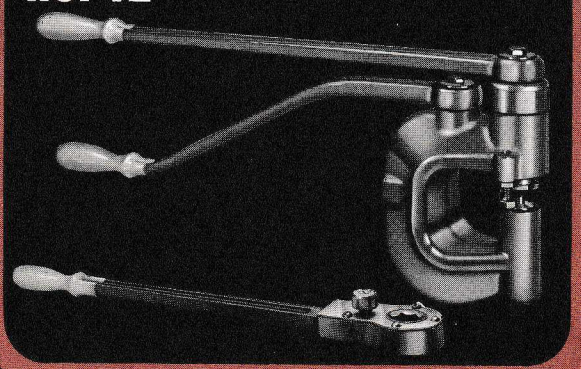


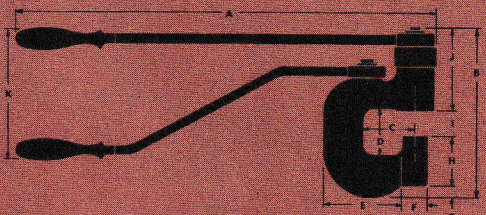
specifications

One 9/32" round punch and die furnished. Options: No. 113 ratchet handle, No. 11 bench mount base. Weights: punch 9 lbs., ratchet handle 3-1/2 lbs., bench mount base 4-1/2 lbs. NOTE: Punch will turn until it contacts the metal.

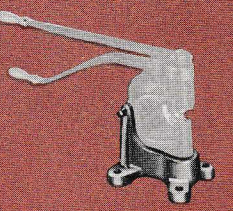
no. 12

7 TONS PUNCHING POWER
3/8" HOLE THRU 1/4" MILD STEEL
LARGE THROAT OPENING





A	19-1/2"	H	2-19/32"
B. spindle up,	8-5/16"	I	1"
spindle down,	7-13/16"	J	3-3/8"
C	2-1/4"	K	5-1/2"
D	2-1/8"	L	1-13/16"
E	3-3/4"	M	1-1/8"
F	1-3/16"	N	2-7/8"
G	13/16"		
SPACE BETWEEN PUNCH AND DIE	3/8"		
RATCHET HANDLE	2-3/8" x 19-1/4"		

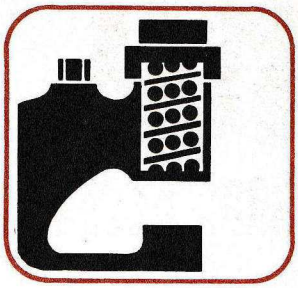


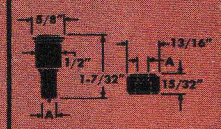
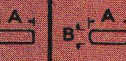
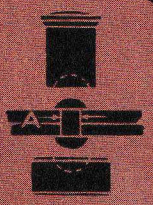
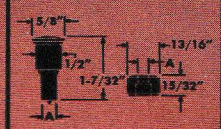
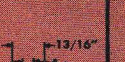
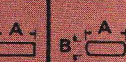
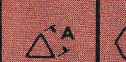
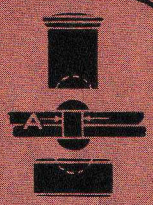
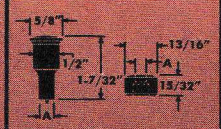
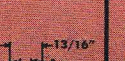
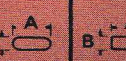
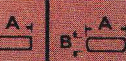
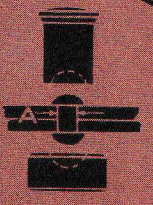
specifications

One 9/32" round punch and die furnished. Options: No. 113 ratchet handle, No. 12 bench mount base. Weights: punch 13 lbs., ratchet handle 3-1/2 lbs., bench mount base 6-1/4 lbs. NOTE: Punch will turn until it contacts the metal.

These compact hand punches operate on a ball bearing screw principle which minimizes effort while producing 7 tons of punching power. The No. 10 is the basic unit. The No. 11 features hollow handles to store punches and dies; the No. 12 has large throat opening. One complete revolution (360°) of the handle will raise or lower the punch 1/2". All three punches are available with ratchet handle and bench mount base.

ball bearing type



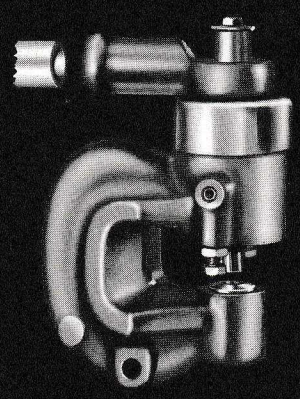
Net Prices F.O.B. Factory		Standard Round Punches & Dies	Special Round Sizes	IRREGULAR SHAPED PUNCHES & DIES — POS. A / POS. B — On types M, N and P, position of die is optional. If not specified, position B will be furnished.						Riveting Punches & Dies
				Type M	Type N	Type P	Type R	Type S	Type T	
No. 10 Punch No. 113 Ratchet Handle No. 10 Bench Mounting Base	$39.33 22.00 8.47	 **No. 10 Punch** — **No. 10 Crown Top Die** (A) (A) (A) 1/16" 7/32" 3/8" 5/64" 15/64" 25/64" 3/32" 1/4" 13/32" 7/64" 17/64" 27/64" 1/8" 9/32" 7/16" 9/64" 19/64" 29/64" 5/32" 5/16" 15/32" 11/64" 21/64" 31/64" 3/16" 11/32" 1/2" 13/64" 23/64" Punch $.94 Ea. Die $.94 Ea. Punch Coupler $1.82 Ea.	33/64" 17/32" Punch $1.82 Ea. Die $1.82 Ea. Punch Coupler $2.42 Ea. 35/64" 9/16" Punch $1.82 Ea. Die $1.82 Ea. Punch Coupler $2.42 Ea.	 (A) (B) 1/2 1/4 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $9.68 EA.	 (A) (B) 3/8 1/4 PUNCH $7.26 EA. DIE $6.05 EA. GUIDE STRIPPER REQUIRED $9.08 EA.	 (A) (B) 1/2 1/4 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $9.68 EA.	 (A) 11/32 PUNCH $6.05 EA. DIE $6.05 EA. GUIDE STRIPPER REQUIRED $6.05 EA.	 (A) 13/32 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $6.60 EA.	 (A) 13/32 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $6.60 EA.	 (A) Dia. of Rivet 1/8" 5/32" 3/16" 7/32" 1/4" PUNCH $2.42 EA. DIE $2.42 EA.
No. 11 Punch No. 113 Ratchet Handle No. 11 Bench Mounting Base	$42.35 22.00 8.47	 **No. 11 Punch** — **No. 11 Crown Top Die** (A) (A) (A) 1/16" 7/32" 3/8" 5/64" 15/64" 25/64" 3/32" 1/4" 13/32" 7/64" 17/64" 27/64" 1/8" 9/32" 7/16" 9/64" 19/64" 29/64" 5/32" 5/16" 15/32" 11/64" 21/64" 31/64" 3/16" 11/32" 1/2" 13/64" 23/64" Punch $.94 Ea. Die $.94 Ea. Punch Coupler $1.82 Ea.	33/64" 17/32" Punch $1.82 Ea. Die $1.82 Ea. Punch Coupler $2.42 Ea. 35/64" 9/16" Punch $1.82 Ea. Die $1.82 Ea. Punch Coupler $2.42 Ea.	 (A) (B) 1/2 1/4 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $9.68 EA.	 (A) (B) 3/8 1/4 PUNCH $7.26 EA. DIE $6.05 EA. GUIDE STRIPPER REQUIRED $9.08 EA.	 (A) (B) 1/2 1/4 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $9.68 EA.	 (A) 11/32 PUNCH $6.05 EA. DIE $6.05 EA. GUIDE STRIPPER REQUIRED $6.05 EA.	 (A) 13/32 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $6.60 EA.	 (A) 13/32 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $6.60 EA.	 (A) Dia. of Rivet 1/8" 5/32" 3/16" 7/32" 1/4" PUNCH $2.42 EA. DIE $2.42 EA.
No. 12 Punch No. 113 Ratchet Handle No. 12 Bench Mounting Base	$45.38 22.00 8.47	 **No. 12 Punch** — **No. 12 Crown Top Die** (A) (A) (A) 1/16" 7/32" 3/8" 5/64" 15/64" 25/64" 3/32" 1/4" 13/32" 7/64" 17/64" 27/64" 1/8" 9/32" 7/16" 9/64" 19/64" 29/64" 5/32" 5/16" 15/32" 11/64" 21/64" 31/64" 3/16" 11/32" 1/2" 13/64" 23/64" Punch $.94 Ea. Die $.94 Ea. Punch Coupler $1.82 Ea.	33/64" 17/32" Punch $1.82 Ea. Die $1.82 Ea. Punch Coupler $2.42 Ea. 35/64" 9/16" Punch $1.82 Ea. Die $1.82 Ea. Punch Coupler $2.42 Ea.	 (A) (B) 1/2 1/4 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $9.68 EA.	 (A) (B) 3/8 1/4 PUNCH $7.26 EA. DIE $6.05 EA. GUIDE STRIPPER REQUIRED $9.08 EA.	 (A) (B) 1/2 1/4 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $9.68 EA.	 (A) 11/32 PUNCH $6.05 EA. DIE $6.05 EA. GUIDE STRIPPER REQUIRED $6.05 EA.	 (A) 13/32 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $6.60 EA.	 (A) 13/32 PUNCH $8.47 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $6.60 EA.	 (A) Dia. of Rivet 1/8" 5/32" 3/16" 7/32" 1/4" PUNCH $2.42 EA. DIE $2.42 EA.

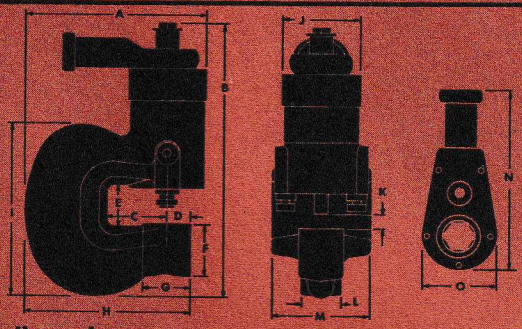
For any size not shown, add 25% to prices listed.
If smallest dimension is less than 1/8", price quoted on application.

hand operated punches

no. 20

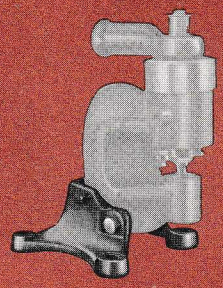
20 TONS PUNCHING POWER. 1/2″ HOLE THRU 1/2″ MILD STEEL.





dimensions

A	7″	F	2-1/8″
B	spindle up, 11-1/2″ spindle down, 10-1/2″	G	1-3/8″
C	2-1/4″	H	6-1/2″
D	7/8″	I	6-13/16″
E	1-5/8″	J	3-1/8″
		K	3/4″
L	1-3/4″		
M	3-7/8″		
N	7″		
O	2-7/8″		
PIPE HANDLE	3/4″ x 48″		



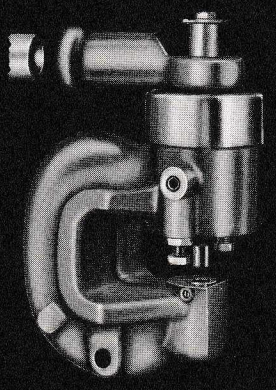
specifications

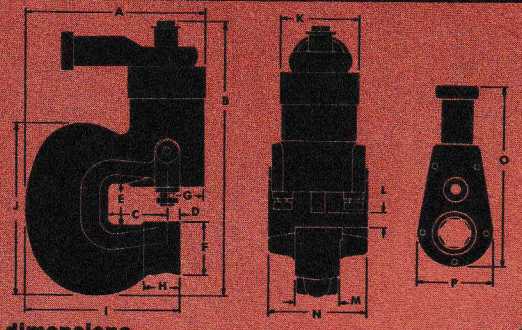
One 1/2″ round punch and die furnished. Options: 48″ pipe handle, No. 119 ratchet handle, No. 20 bench mounting base. Weights: punch 25 lbs., pipe handle 4 lbs., ratchet handle 4-1/2 lbs., bench mounting base 4-1/2 lbs.

NOTE: Punch will turn until it contacts the metal.

no. CTL20

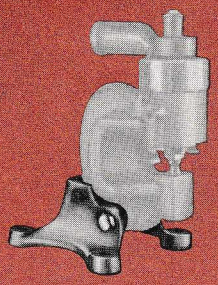
20 TONS PUNCHING POWER. 1/2″ HOLE THRU 1/2″ MILD STEEL. Punches close to leg of angle iron . . . 9/16″ from leg to center of hole.





dimensions

A	7″	F	2-1/8″
B	spindle up, 11-1/2″ spindle down, 10-1/2″	G	1-1/2″
C	2-1/4″	H	1″
D	1/2″	I	6″
E	1-5/8″	J	6-13/16″
		K	3-1/8″
L	3/4″		
M	1-3/4″		
N	3-7/8″		
O	7″		
P	2-7/8″		
PIPE HANDLE	3/4″ x 48″		



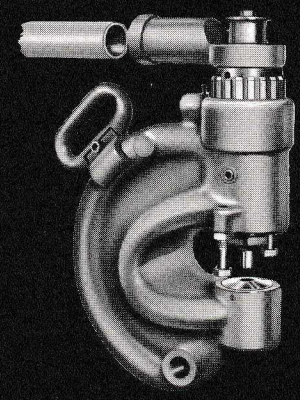
specifications

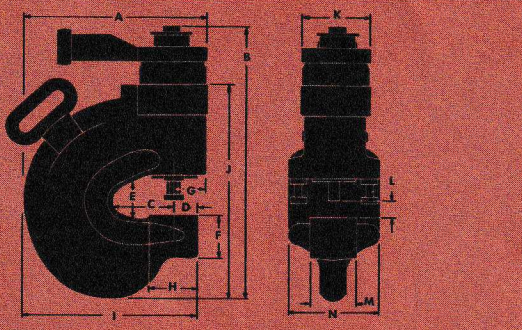
One 1/2″ round punch and die furnished. Options: 48″ pipe handle, No. 119 ratchet handle, No. CTL 20 bench mounting base. Weights: punch 25 lbs., pipe handle 4 lbs., ratchet handle 4-1/2 lbs., bench mounting base 4-1/2 lbs.

NOTE: Punch will turn until it contacts the metal.

no. 40

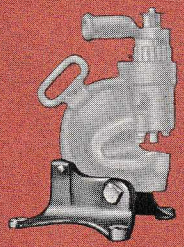
30 TONS PUNCHING POWER. 5/8″ HOLE THRU 5/8″ MILD STEEL.





dimensions

A	11″	F	2-1/2″
B	spindle up, 17″ spindle down, 16″	G	2″
C	3-1/2″	H	3″
D	1-1/2″	I	10″
E	2-1/4″	J	12-3/4″
		K	4″
L	7/8″		
M	2-3/4″		
N	5-1/4″		
PIPE HANDLE	1″ x 60″		



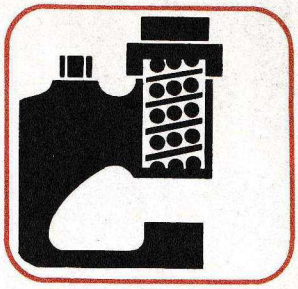
specifications

One standard round punch and die of your choice furnished. Options: 60″ pipe handle, No. 40 bench mounting base. Weights: punch 66 lbs., pipe handle 9-1/2 lbs., bench mounting base 16 lbs.

NOTE: Punch will turn until it contacts the metal.

This group of hand punches operates on a ball bearing screw principle which produces up to 30 tons of punching power while minimizing manual effort. One complete revolution (360°) of the handle will raise or lower the punch 1/2". All three punches can be used portably or in a fixed position with a bench mount base.

ball bearing type



Net Prices F.O.B. Factory

Standard Round Punches & Dies

Special Round Sizes

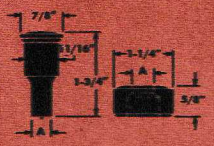
IRREGULAR SHAPED PUNCHES & DIES

POS. A ⬭ POS. B ⬭ On types M, N and P, position of die is optional. If not specified, position B will be furnished.

Type M | Type N | Type P | Type R | Type S | Type T

Riveting Punches & Dies

No. 20 Punch $78.50
48" Pipe Handle 4.84
No. 119 Ratchet Handle 26.40
No. 20 Bench Mounting Base 8.47



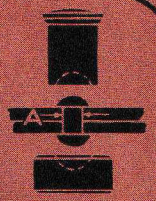
No. 20 Punch — **No. 20 Crown Top Die**

(A)		(A)	
1/8"	9/32"	27/64"	9/16"
9/64"	19/64"	7/16"	37/64"
5/32"	5/16"	29/64"	19/32"
11/64"	21/64"	15/32"	39/64"
3/16"	11/32"	31/64"	5/8"
13/64"	23/64"	1/2"	41/64"
7/32"	3/8"	33/64"	21/32"
15/64"	25/64"	17/32"	43/64"
1/4"	13/32"	35/64"	11/16"
17/64"			

Punch $1.54 Ea.
Die $1.54 Ea.
Punch Coupler $2.42 Ea.

45/64"
23/32"
47/64"
3/4"
Punch $2.42 Ea.
Die $2.42 Ea.
Punch Coupler $3.03 Ea.
49/64"
25/32"
51/64"
13/16"
Punch $2.42 Ea.
Die $2.42 Ea.
Split Coupler $3.03 Ea.

Type M	Type N	Type P	Type R	Type S	Type T
(A) (B)	(A) (B)	(A) (B)	(A)	(A)	(A)
1/2 1/8	1/2 1/8	11/16 1/2	3/16	19/32	19/32
1/2 3/16	1/2 3/16		1/4		
1/2 1/4	1/2 1/4		5/16		
1/2 5/16	1/2 5/16		11/32		
1/2 3/8	1/2 3/8		3/8		
1/2 7/16	9/16 3/8		7/16		
11/16 1/2			15/32		
			1/2		
			17/32		
			9/16		
PUNCH $12.65 EA. DIE $12.65 EA. GUIDE STRIPPER REQUIRED $13.48 EA.	PUNCH $10.29 EA. DIE $10.29 EA. GUIDE STRIPPER REQUIRED $14.85 EA.	PUNCH $12.65 EA. DIE $12.65 EA. GUIDE STRIPPER REQUIRED $14.85 EA.	PUNCH $10.29 EA. DIE $10.29 EA. GUIDE STRIPPER REQUIRED $13.48 EA.	PUNCH $12.65 EA. DIE $12.65 EA. GUIDE STRIPPER REQUIRED $14.85 EA.	PUNCH $12.65 EA. DIE $12.65 EA. GUIDE STRIPPER REQUIRED $14.85 EA.

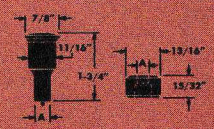


(A) Dia. of Rivet

1/8"	5/32"	3/16"
7/32"	1/4"	9/32"
5/16"	11/32"	3/8"

PUNCH $3.03 EA.
DIE $3.03 EA.

No. CTL 20 Punch $84.55
48" Pipe Handle 4.84
No. 119 Ratchet Handle 26.40
No. CTL 20 Bench Mounting Base 8.47



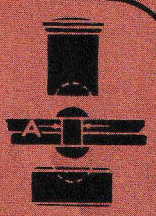
No. 20 Punch — **No. 10 Crown Top Die**

(A)		(A)	
1/8"	1/4"	23/64"	15/32"
9/64"	17/64"	3/8"	31/64"
5/32"	9/32"	25/64"	1/2"
11/64"	19/64"	13/32"	33/64"†
3/16"	5/16"	27/64"	17/32"†
13/64"	21/64"	7/16"	35/64"†
7/32"	11/32"	29/64"	9/16"†
15/64"			

Punch $1.54 Ea.
Die $.94 Ea.

†Special Dies
33/64"
17/32"
35/64"
9/16"
Die $1.82 Ea.

Type M	Type N	Type P	Type R	Type S	Type T
(A) (B)	(A) (B)	(A) (B)	(A)	(A)	(A)
1/2 1/4	3/8 1/4	1/2 1/4	11/32	13/32	13/32
PUNCH $12.65 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $13.48 EA.	PUNCH $10.29 EA. DIE $6.05 EA. GUIDE STRIPPER REQUIRED $14.85 EA.	PUNCH $12.65 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $14.85 EA.	PUNCH $10.29 EA. DIE $6.05 EA. GUIDE STRIPPER REQUIRED $13.48 EA.	PUNCH $12.65 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $14.85 EA.	PUNCH $12.65 EA. DIE $6.38 EA. GUIDE STRIPPER REQUIRED $14.85 EA.

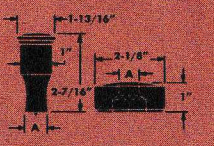


(A) Dia. of Rivet

1/8"	5/32"	3/16"
7/32"	1/4"	

PUNCH $3.03 EA.
DIE $2.42 EA.

No. 40 Punch $211.75
60" Pipe Handle 6.05
No. 40 Bench Mounting Base 18.15



No. 40 Punch — **No. 40 Crown Top Die**

(A)		(A)	
1/8"	3/8"	19/32"	13/16"
5/32"	13/32"	5/8"	27/32"
3/16"	7/16"	21/32"	7/8"
7/32"	15/32"	11/16"	29/32"
1/4"	1/2"	23/32"	15/16"
9/32"	17/32"	3/4"	31/32"
5/16"	9/16"	25/32"	1"
11/32"			

Punch $3.63 Ea.
Die $4.84 Ea.
Split Punch Coupler $4.24 Ea.

Type M	Type N	Type P	Type R	Type S	Type T
(A) (B)	(A) (B)	(A) (B)	(A)	(A)	(A)
1 3/16	3/4 1/4	1 3/4	1/4	27/32	27/32
1 1/4	3/4 5/16		5/16		
1 5/16	3/4 3/8		3/8		
1 3/8	3/4 7/16		7/16		
1 1/2	3/4 1/2		1/2		
1 9/16	13/16 1/2		5/8		
			11/16		
PUNCH $13.20 EA. DIE $16.34 EA. GUIDE STRIPPER REQUIRED $18.48 EA.	PUNCH $11.55 EA. DIE $14.52 EA. GUIDE STRIPPER REQUIRED $15.73 EA.	PUNCH $13.20 EA. DIE $16.34 EA. GUIDE STRIPPER REQUIRED $18.48 EA.	PUNCH $11.55 EA. DIE $14.52 EA. GUIDE STRIPPER REQUIRED $11.00 EA.	PUNCH $13.20 EA. DIE $16.34 EA. GUIDE STRIPPER REQUIRED $12.65 EA.	PUNCH $13.20 EA. DIE $16.34 EA. GUIDE STRIPPER REQUIRED $12.65 EA.

For any size not shown, add 25% to prices listed.
If smallest dimension is less than 1/8", price quoted on application.

hand operated punches

Roller bearing action makes these punches easy to operate. Both tools are designed for fixed location use. The No. 16 features a solid forged body for strength and extra punching power. The No. 17 is a lighter duty punch and has a welded steel frame with larger throat capacity.

roller bearing type

no. 16

7 TONS PUNCHING POWER. 3/8" HOLE THRU 1/4" MILD STEEL. BENCH MOUNT

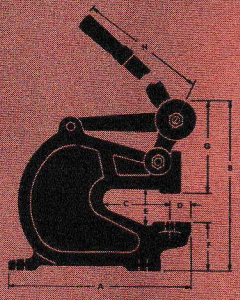
Die shoe is removable and adjustable, permitting the use of close fitting punches and dies.

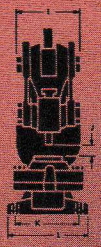
dimensions

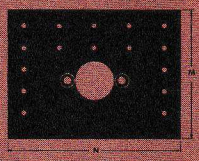
A..8-7/16"	F...3-1/2"	K.....3"
B...9-5/8"	G...5-3/4"	L...3-7/8"
C...3-1/4"	H...24-1/2"	M.....6"
D....7/8"	I....2-3/4"	N.....8"
E....1-3/4"	J.....3/8"	

specifications

Punch furnished with one each round 7/32", 9/32" and 11/32" punch and die. Weights: punch 26-1/2 lbs., work table 3-1/2 lbs.







Work table: 1/4"-20 tapped holes for stops. 3 stops furnished.

no. 17

5 TONS PUNCHING POWER. 1/4" HOLE THRU 1/4" MILD STEEL. BENCH MOUNT

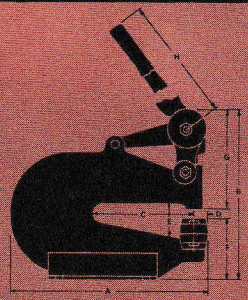
Die shoe is removable and adjustable, permitting the use of close fitting punches and dies.

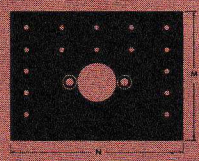
dimensions

A...12-3/8"	H....24-1/2"	
B...10-9/16"	I.....2-7/8"	
C....6-1/2"	J.....3/8"	
D.....7/8"	K....3-7/16"	
E....2-1/8"	L.....4-1/2"	
F...3-15/16"	M.....6"	
G....6-3/8"	N.....8"	

specifications

Punch furnished with one each round 7/32", 9/32" and 11/32" punch and die. Weights: punch 38-1/2 lbs., work table 3-1/2 lbs.





Work table: 1/4"-20 tapped holes for stops. 3 stops furnished.

no. 16

Net Prices F.O.B. Factory

No. 16 Punch $60.50
No. 16 Work Table 9.08

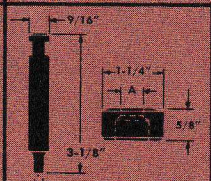
no. 17

Net Prices F.O.B. Factory

No. 17 Punch $90.75
No. 17 Work Table 9.08

no. 16 and 17 ●

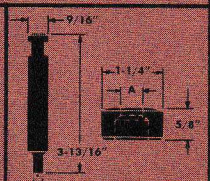
Standard Round Punches & Dies



No. 16 Punch (A)	No. 20 Flat Top Die (A)	(A)
1/16"	15/64"	13/32"
5/64"	1/4"	27/64"
3/32"	17/64"	7/16"
7/64"	9/32"	29/64"
1/8"	19/64"	15/32"
9/64"	5/16"	31/64"
5/32"	21/64"	1/2"
11/64"	11/32"	33/64"
3/16"	23/64"	17/32"
13/64"	3/8"	35/64"
7/32"	25/64"	9/16"

Punch $1.54 Ea.
Die $1.54 Ea.

Standard Round Punches & Dies



No. 17 Punch (A)	No. 20 Flat Top Die (A)	(A)
1/16"	15/64"	13/32"
5/64"	1/4"	27/64"
3/32"	17/64"	7/16"
7/64"	9/32"	29/64"
1/8"	19/64"	15/32"
9/64"	5/16"	31/64"
5/32"	21/64"	1/2"
11/64"	11/32"	33/64"
3/16"	23/64"	17/32"
13/64"	3/8"	35/64"
7/32"	25/64"	9/16"

Punch $1.54 Ea.
Die $1.54 Ea.

No.16&17 Drill Size Punches & Dies

Drill Sizes No. 52 thru Z
Punch $1.82 Ea.
Die $1.82 Ea.

IRREGULAR SHAPED PUNCHES & DIES

Type M

A	B
(B)	(A)
1/2	1/8
9/16	1/8
1/2	3/16
9/16	3/16
1/2	1/4
9/16	1/4
1/2	5/16
9/16	5/16
1/2	3/8
9/16	3/8

PUNCH $8.47 EA.
DIE $12.65 EA.

Type N

(A)	(B)
1/2	1/8
1/2	3/16
1/2	1/4

PUNCH $7.26 EA.
DIE $10.29 EA.

Type P

(A)	(B)
1/2	1/4
9/16	3/8

PUNCH $8.47 EA.
DIE $12.65 EA.

Type R

(A)
1/8
3/16
1/4
5/16
3/8

PUNCH $6.05 EA.
DIE $10.29 EA.

Type S

(A)
15/32

PUNCH $8.47 EA.
DIE $12.65 EA.

Type T

(A)
15/32

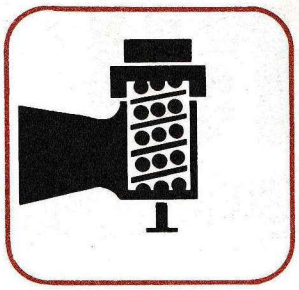
PUNCH $8.47 EA.
DIE $12.65 EA.

NOTE: To punch burr free holes, order dies (female) as follows: 22 ga. and lighter — state gauge, 12 ga. and lighter — flat top dies, 11 ga. and lighter — crown top dies.

For any size not shown, add 25% to prices listed. If smallest dimension is less than 1/8", price quoted on application.

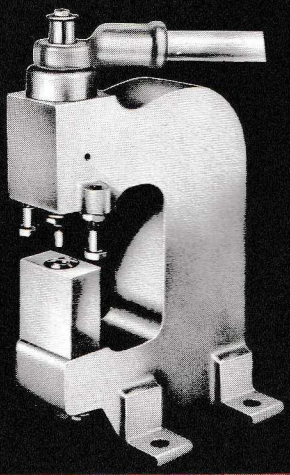
These bench mount punches operate on a ball bearing screw principle to reduce manual effort. Both are well suited to punching angles and channels. The No. 25 has lighter capacity with a deep throat. The No. 24 has more punching power with less throat depth.

ball bearing type



no. 24

20 TONS PUNCHING POWER. 1/2" HOLE THRU 1/2" MILD STEEL. BENCH MOUNT

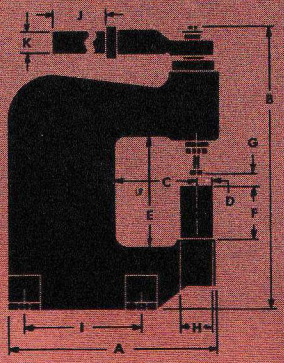


dimensions

A	9-1/4"	E	5-3/4"
B...spindle up,	16-1/2"	F	3"
spindle down,	15-1/2"	G	3/4"
C	3-3/4"	H	1-1/2"
D	13/16"	I	.5" x 5-1/4"
J			48"
K			3/4"
FRAME WIDTH			2-3/4"
OVERALL WIDTH			6-3/4"
RATCHET HANDLE			2-7/8" x 7"

specifications

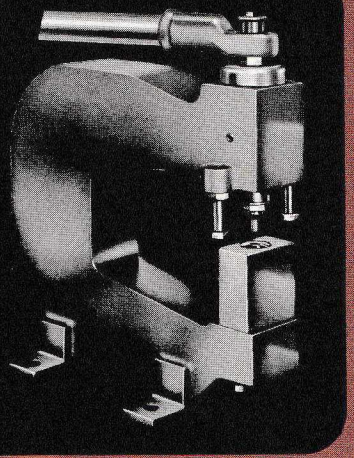
One 1/2" round punch and die furnished.
Options: 48" pipe handle, No. 119 ratchet handle.
Weights: punch 75-1/2 lbs., pipe handle 4 lbs., ratchet handle 4-1/2 lbs.
NOTE: Punch will turn until it contacts the metal.



One complete revolution (360°) of the handle will raise or lower the punch 1/2".

no. 25

11 TONS PUNCHING POWER. 3/8" HOLE THRU 3/8" MILD STEEL. BENCH MOUNT

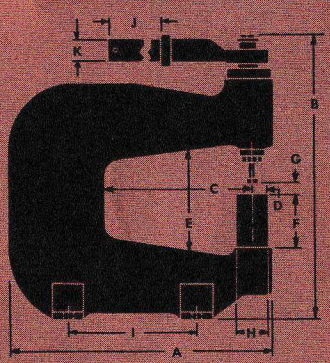


dimensions

A	14-3/4"	E	5-3/4"
B...spindle up,	16-1/2"	F	3"
spindle down,	15-1/2"	G	3/4"
C	8-1/4"	H	1-1/2"
D	13/16"	I	.7-1/4" x 5-1/4"
J			48"
K			3/4"
FRAME WIDTH			2-3/4"
OVERALL WIDTH			6-3/4"
RATCHET HANDLE			2-7/8" x 7"

specifications

One 1/2" round punch and die furnished.
Options: 48" pipe handle, No. 119 ratchet handle.
Weights: punch 142 lbs., pipe handle 4 lbs., ratchet handle 4-1/2 lbs. NOTE: Punch will turn until it contacts the metal.



One complete revolution (360°) of the handle will raise or lower the punch 1/2".

no. 24

Net Prices F.O.B. Factory

No. 24 Punch	$103.00
48" Pipe Handle	4.84
No. 119 Ratchet Handle	26.40

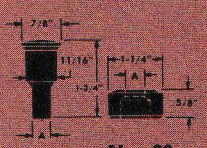
no. 25

Net Prices F.O.B. Factory

No. 25 Punch	$145.20
48" Pipe Handle	4.84
No. 119 Ratchet Handle	26.40

no. 24 and 25

Standard Round Punches & Dies



No. 20 Punch — No. 20 Crown Top Die

(A)		(A)	
1/8"	9/32"	27/64"	9/16"
9/64"	19/64"	7/16"	37/64"
5/32"	5/16"	29/64"	19/32"
11/64"	21/64"	15/32"	39/64"
3/16"	11/32"	31/64"	5/8"
13/64"	23/64"	1/2"	41/64"
7/32"	3/8"	33/64"	21/32"
15/64"	25/64"	17/32"	43/64"
1/4"	13/32"	35/64"	11/16"
17/64"			

Punch $1.54 Ea./Die $1.54 Ea.

No.24 & 25 Special Round Sizes

45/64"
23/32"
47/64"
3/4"
Punch $2.42 Ea.
Die $2.42 Ea.
Punch Coupler $3.03 Ea.
49/64"
25/32"
51/64"
13/16"
Punch $2.42 Ea.
Die $2.42 Ea.
Split Coupler $3.03 Ea.

IRREGULAR SHAPED PUNCHES & DIES

POS. A ⬭ POS. B ⬭ On types M, N and P, position of die is optional. If not specified, position B will be furnished.

Type M	Type N	Type P	Type R	Type S	Type T
(A) (B) 11/16 1/2	(A) (B) 9/16 3/8	(A) (B) 11/16 1/2	(A) 15/32	(A) 19/32	(A) 19/32
PUNCH $12.65 EA. DIE $12.65 EA. GUIDE STRIPPER REQUIRED $13.48 EA.	PUNCH $10.29 EA. DIE $10.29 EA. GUIDE STRIPPER REQUIRED $14.85 EA.	PUNCH $12.65 EA. DIE $12.65 EA. GUIDE STRIPPER REQUIRED $14.85 EA.	PUNCH $10.29 EA. DIE $10.29 EA. GUIDE STRIPPER REQUIRED $13.48 EA.	PUNCH $12.65 EA. DIE $12.65 EA. GUIDE STRIPPER REQUIRED $14.85 EA.	PUNCH $12.65 EA. DIE $12.65 EA. GUIDE STRIPPER REQUIRED $14.85 EA.

Riveting Punches & Dies

(A) Dia. of Rivet

1/8"	5/32"	3/16"
7/32"	1/4"	9/32"
5/16"	11/32"	3/8"

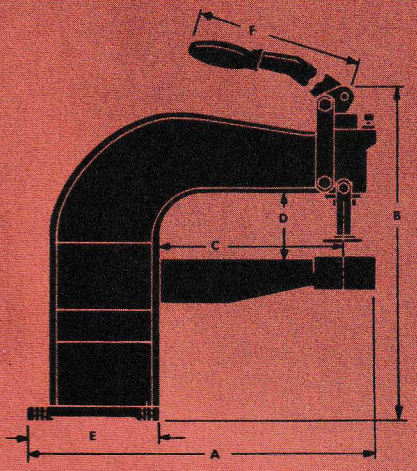
PUNCH $3.03 EA.
DIE $3.03 EA.

For any size not shown, add 25% to prices listed.
If smallest dimension is less than 1/8", price quoted on application.
Irregular shaped punches and dies use No. 24 style punch.

hand operated punches

no. 15

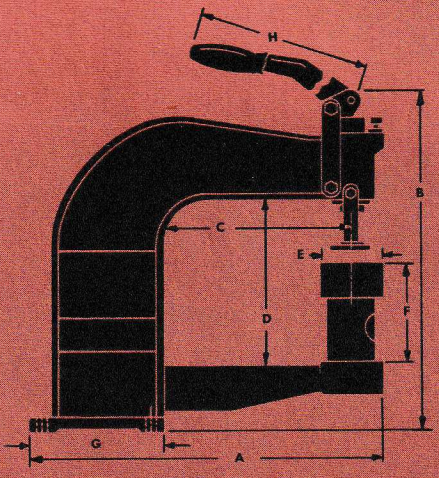
FOR FLAT SHAPES
2 TONS
PUNCHING POWER
1-7/16" HOLE
THRU 20 GA.
3/16" HOLE
THRU 10 GA.



No. 15 HORN PUNCH dimensions

A	19-1/2"	D	3-7/16"
B	18-5/8"	E	7" x 7"
C	10-1/4"	F	15"

FLOOR STAND
23" W x 37" H x 14" DEEP



No. 15 PEDESTAL TYPE HORN PUNCH dimensions

A	19-1/2"	E	2-9/16"
B	18-5/8"	F	5-9/16"
C	10-1/4"	G	7" x 7"
D	8-15/16"	H	15"

FLOOR STAND
23" W x 37" H x 14" DEEP

punches and dies

1-7/16" ROUND

1-1/16" SQUARE

15/16" x 1" TYPE M

1/2" x 1" TYPE N

The No. 15 Horn Punch and No. 15 Pedestal Type Horn Punch use standard No. 8 and No. 28 style punches and No. 20 and No. 40 style dies. Pages 24 through 43 list all sizes and shapes available. The largest punches and dies that can be used are listed at the left. No. 8 style punches require a No. 15 punch holder. No. 20 style dies require a No. 15 die adaptor.

specifications (BOTH PUNCHES)

Two horn positions.
Std. equipment includes: No. 15 punch holder, No. 15 die adaptor, No. 15 stripper arms, A6 stripper plate.
Length of stroke 1-1/4".
Dia. of punch shank hole in ram 1".
Weights: punch only 71 lbs., floor stand 97 lbs., No. 15 horn only 21 lbs., No. 15 pedestal die holder only 4-1/2 lbs.

net prices (F.O.B. Factory)

No. 15 Horn Punch	$256.25
No. 15 Pedestal Type Horn Punch	270.00
No. 15 Floor Stand	38.50
No. 15 Horn Only	41.25
No. 15 Pedestal Die Holder Only	16.50

punch tooling

No. 15 PUNCH HOLDER
$8.25

No. 15 DIE ADAPTOR
$5.50

No. 15 STRIPPER ARMS
$11.00

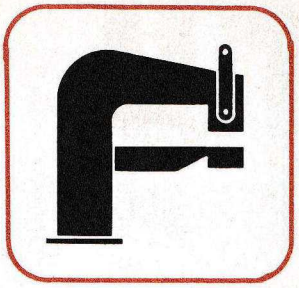
STRIPPER PLATES

SIZE	CAPACITY	PRICE
A6	Punch size to 1/2"	$6.05
B6	Punch size to 1"	6.05
C6	Punch size to 1-7/16"	6.60

Order plates in accordance with punch size.

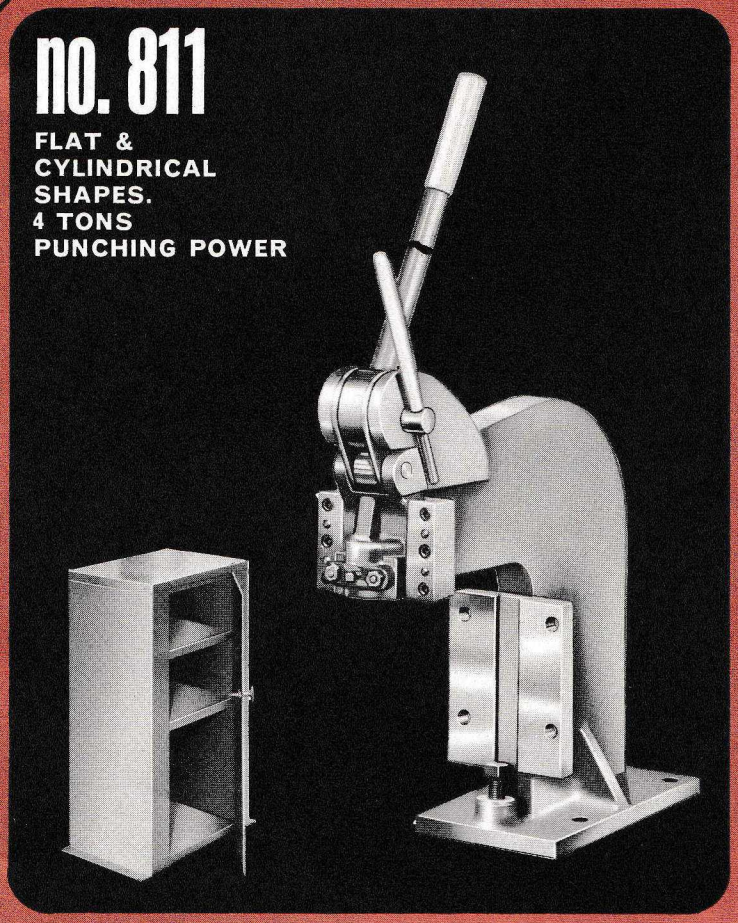
Horn type punches are designed for use in fabricating rectangular, cylindrical and other irregular shaped metal pieces. The models shown on pages 16 and 17 can be easily adapted for normal punching of flat stock with die holders. No. 15 punches will handle canopies, channels and other flat shapes. The No. 811 combination unit will handle both flat and cylindrical shapes.

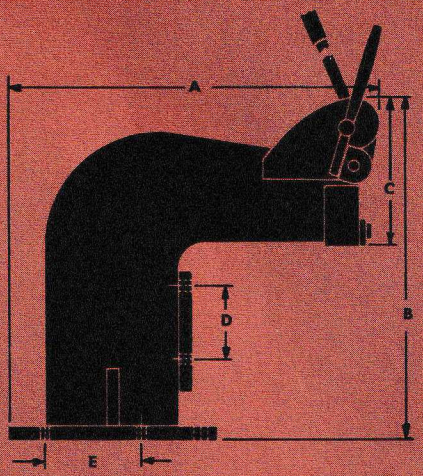
horn type



no. 811

FLAT & CYLINDRICAL SHAPES. 4 TONS PUNCHING POWER

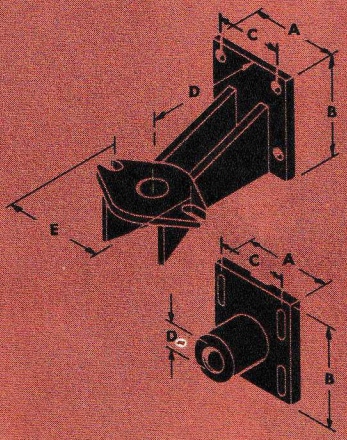




NO. 811 COMBINATION HORN PUNCH

dimensions

A.....19-1/2" D.....3-7/8"
B.....17-3/4" E.....5"
C.....7-1/2"
OVERALL WIDTH.....6"
811 FLOOR STAND...23" W x 37" H x 14" DEEP



No. 811A STANDARD DIE HOLDER

dimensions

A.....5" D.....8-3/8"
B.....6-1/4" E.....5-1/2"
C.....3-3/4"

NOTE: No. 811A uses No. 118-2-3/4 die shoe, No. 20 or No. 40 die adaptor and standard punches and dies — see pages 24 through 43.

No. 811E HORN ADAPTOR

dimensions

A.....5" C.....3-3/4"
B.....6-1/4" D.....2"

Nos. 811B, C, D use No. 8 round punches to 1/2" or No. 28 punches. When ordering, specify horn number.

	PUNCHES & DIES — MAX. SIZE			
	Round	Square	Type M	Type N
No. 811B — No. 20 Horn Wt. 8 lbs./Price $38.50 — 811B uses special No. 20 round dies. Add $3.30 to Std. No. 20 dies.	13/16"	1/2"	9/16" x 11/16"	7/16" x 1/2"
No. 811C — No. 40 Horn Wt. 14 lbs./Price $55.00 — 811C uses special No. 40 round dies. Add $4.13 to Std. No. 40 dies.	1-7/16"	1-1/16"	15/16" x 1"	1/2" x 1"
No. 811D — No. 28 Horn — 811D uses special No. 28 round dies. Add $4.95 to Std. No. 28 dies. Wt. 25 lbs. Price $66.00	2"	1-1/2"	3/4" x 2"	1" x 1-1/2"

specifications

The No. 811 Combination Horn Punch and No. 811E Horn Adaptor should be purchased as a basic unit, then the Nos. 811B, C, D Horns may be purchased according to requirements.

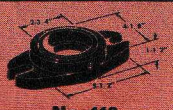
Capacity (mild steel) 811B horn....13/16" hole thru 18 ga.
811C horn....1-7/16" hole thru 18 ga.
811D horn.....2" hole thru 20 ga.
Depth of throat..7-1/2" Hght. of throat (horn in Pos.) 2-1/4"
Space between punch and die (punch in highest Pos.)..3/4"
Slug clearance (horn in Pos.) 811B horn.....7/8"
811C horn.....1-1/2"
811D horn.....2-1/8"
Dia. of punch shank hole in ram.....1"
Weights: No. 811 punch 102 lbs., No. 811A Std. die holder 19 lbs., No. 811E horn adaptor 8 lbs., No. 811 floor stand 97 lbs.

net prices (F.O.B. Factory)

No. 811	Combination Horn Punch	$121.00
No. 811A	Standard Die Holder	44.00
No. 811E	Horn Adaptor	33.00
No. 811	Floor Stand	38.50

punch tooling

No. 20 DIE ADAPTOR $5.50



No. 118 2-3/4 DIE SHOE $13.75

No. 40 DIE ADAPTOR $5.50

GAUGE WORK TABLE $16.50

L8 PUNCH HOLDER $8.25

STRIPPER ARMS $12.10

STRIPPER PLATES

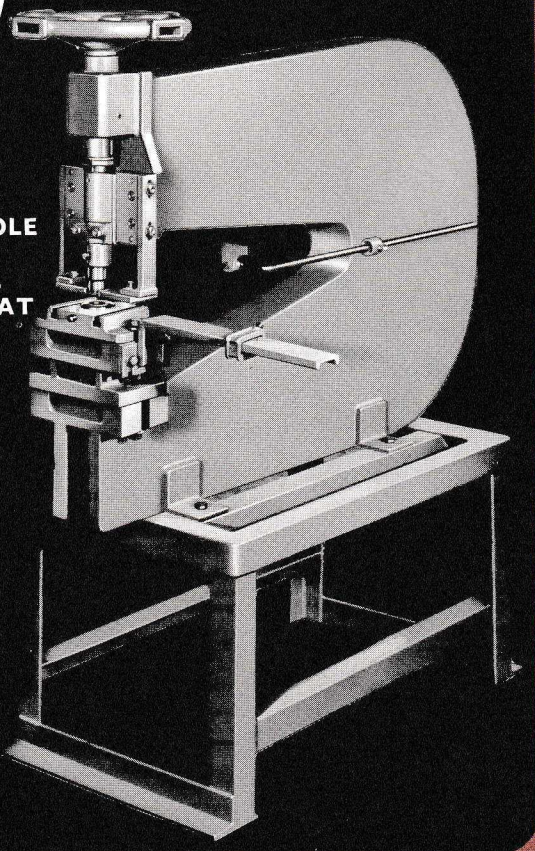
SIZE	CAPACITY	PRICE
A6	Punch size to 1/2"	$6.05
B6	Punch size to 1"	6.05
C6	Punch size to 2"	6.60

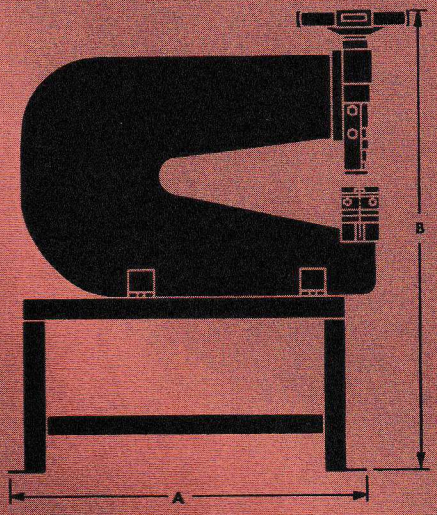
Order plates in accordance with punch size.

hand operated punches

no. 027

19 TONS PUNCHING POWER. 1/2" HOLE THRU 1/2" MILD STEEL. 1" HOLE THRU 1/4" MILD STEEL. DEEP THROAT





dimensions

A.....43"
B (CRANK IN DOWN POS.).....51"
OVERALL WIDTH.....20"
SEE SPECIFICATIONS FOR OTHER DIMS.

This rugged deep throat punch is crank operated and features an all steel welded frame. Ram travel is precise and a wide variety of tooling is available for varied punching operations. Standard equipment includes: side gauge, depth gauge, F8 punch holder, F28 punch holder, No. 20 die adaptor, No. 40 die adaptor, F2-3/4" O.D. die shoe, die shoe support, one set 1/2" round punch and die, 32" bar handle, set of stripper arms and A7 stripper plate.

punches and dies

A complete selection of punches and dies are available for the No. 027 punch. Pages 24 through 43 lists all sizes, shapes and prices.

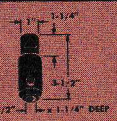
specifications

Depth of throat	24"	Dia. of punch shank hole in ram	1"
Height of throat at ram	9-7/8"	Depth of punch shank hole in ram	1-1/4"
Length of stroke	1-1/4"	Slug clearance	3" x 5"
Die space less die shoe support	9-7/8"	Bed plate holes (c to c)	6-3/4"
Die space w/die shoe support in Pos.	5-7/8"	Weights: punch only 800 lbs., stand only 90 lbs.	

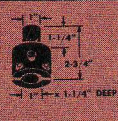
net prices (F.O.B. Factory)

No. 027	Punch only with standard equipment	$536.50
No. 027	Punch only without standard equipment	520.00
No. 027	Punch with stand and standard equipment	575.00
No. 027	Punch with stand, without standard equipment	558.50

punch tooling



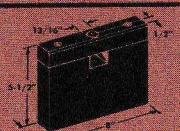
F8 PUNCH HOLDER
$8.25



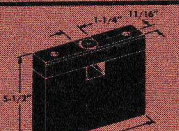
F28 PUNCH HOLDER
$12.10

No. 20 DIE ADAPTOR
$5.50

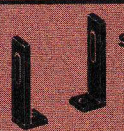
No. 40 DIE ADAPTOR
$5.50



STD. 10 DIE SHOE
$17.60

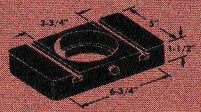


STD. 20 DIE SHOE
$17.60



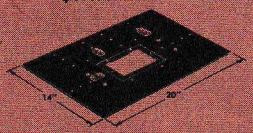
STRIPPER ARMS
$11.00

F 2-3/4 DIE SHOE
$13.75



F 3-3/4 DIE SHOE
$24.20

F 4-3/4 DIE SHOE
$33.00



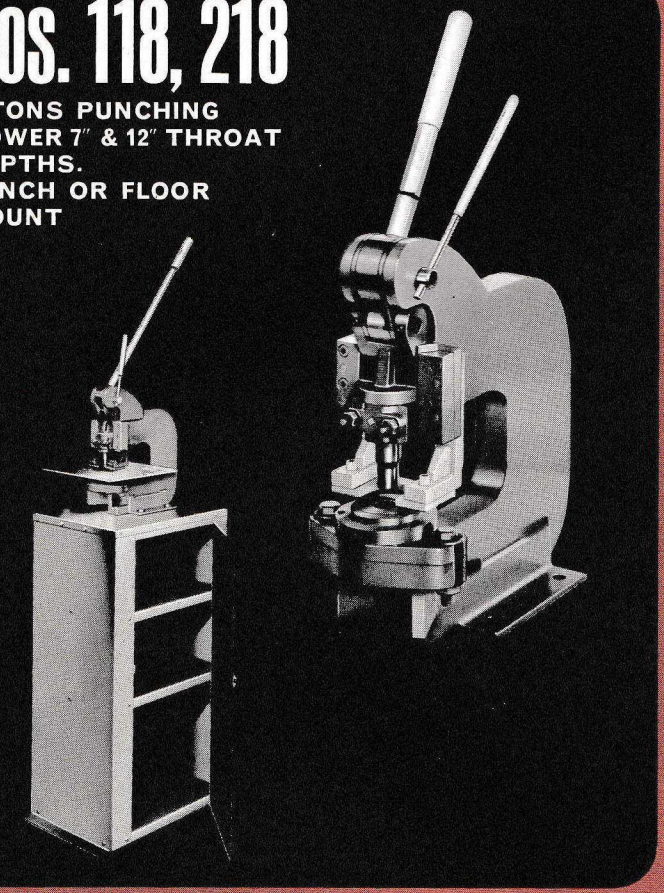
GAUGE WORK TABLE
$26.40

STRIPPER PLATES

SIZE	CAPACITY	PRICE
A7	Punch size to 1/2"	$6.60
B7	Punch size to 1"	6.60
C7	Punch size to 2"	7.26
D7	Punch size to 3"	7.26
E7	Punch size to 4"	7.87

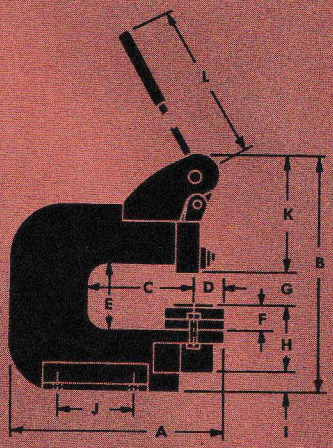
Order plates in accordance w/punch size.

deep throat type



nos. 118, 218

4 TONS PUNCHING POWER 7″ & 12″ THROAT DEPTHS. BENCH OR FLOOR MOUNT



dimensions	118	218
A	14-1/2″	20-7/8″
B	15-3/4″	17-5/8″
C	7″	12″
D	2-1/16″	2-1/16″
E	4-1/2″	4-1/2″
HEIGHT OF THROAT W/WORK TABLE	2-3/4″	2-3/4″
DIE SPACE (PUNCH IN HIGHEST POS.)	3/4″	3/4″
F	1-1/2″	1-1/2″
G	2-5/8″	2-5/8″
H	4-3/8″	4-3/8″
I	1-1/4″	3-1/8″
J	5″	5″
K	7-1/2″	7-1/2″
L	24″	24″
FLOOR STAND 23″W x 37″ H x 14″ DEEP		

These deep throat hand punches are actuated by an eccentric cam rolling on a heavy duty bearing. Ram is held securely by the gibs. Die shoe is removable and adjustable, permitting the use of close fitting punches and dies. 3/16″ adjustment in ram position is provided. Standard equipment includes: L8 punch holder, No. 20 die adaptor, No. 40 die adaptor, 118 — 2-3/4″ die shoe, stripper arms, A6 stripper plate, one set 1/2″ round punch and die.

punches and dies

2″ ROUND

1-1/2″ SQUARE

3/4″ x 2″ TYPE M

1″ x 1-1/2″ TYPE N

The Nos. 118 and 218 Hand Punches accommodate a wide range of punches and dies. Pages 24 through 43 list all styles, sizes and shapes available. The largest punches and dies that can be used are listed at the left.

specifications 118, 218

Capacity (mild steel) ..... 2″ hole thru 14 ga./1/4″ hole thru 3/16″
Length of stroke ..... 3/4″
Slug hole clearance 2-1/4″
Dia. of punch shank hole in ram ..... 1″
Wt. bench model: 118 = 103 lbs./218 = 134 lbs.
Wt. w/floor stand: 118 = 200 lbs./218 = 231 lbs.
Wt. floor stand only ..... 97 lbs.

net prices (F.O.B. Factory)

	118	218
Without floor stand with standard equipment	$151.25	$206.25
With floor stand with standard equipment	189.75	244.75

punch tooling

L8 PUNCH HOLDER $8.25

NO. 20 DIE ADAPTOR $5.50

NO. 40 DIE ADAPTOR $5.50

118 — 2-3/4 DIE SHOE $13.75

STRIPPER ARMS $12.10

GAUGE WORK TABLE $16.50

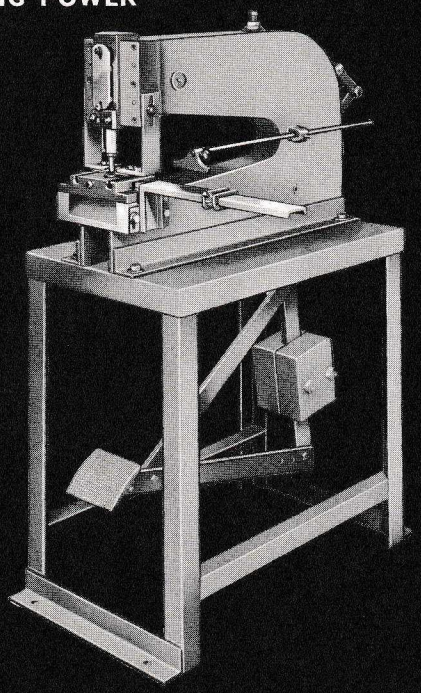
STRIPPER PLATES

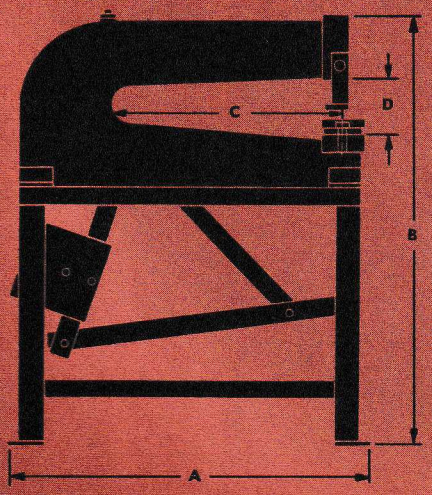
SIZE	CAPACITY	PRICE
A6	Punch size to 1/2″	$6.05
B6	Punch size to 1″	6.05
C6	Punch size to 2″	6.60

Order plates in accordance w/punch size.

nos. 29, 58, 68

5 TONS PUNCHING POWER





dimensions

	29,	58,	68
A	25"	34"	40"
B	48"	48"	48"
C	10"	18"	24"
D	5-3/4"	5-3/4"	5-3/4"
OVERALL WIDTH	18"	18"	18"

Power and versatility are provided in these toggle action foot presses. Three throat depths are offered and a large selection of punches and dies are available for varied metalworking applications. Standard equipment includes: depth gauge, side gauge, F8 punch holder, F28 punch holder, No. 20 die adaptor, No. 40 die adaptor, standard F2-3/4" die shoe, one set 1/2" round punch and die, stripper arms, A7 stripper plate.

punches and dies

A complete selection of punches and dies are available for 29, 58 and 68 presses. Pages 24 through 43 lists all sizes, shapes and prices.

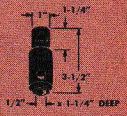
specifications 29, 58, 68

Capacity	2" hole thru 16 ga. mild steel		
Length of stroke	1"	Depth of punch shank hole in ram	1-1/4"
Adjustment of ram	3/4"	Slug clearance	3" x 5"
Die space with stroke down, adjustment up	5"	Bed plate holes (c to c)	6-3/4"
Dia. of punch shank hole in ram	1"	Bed plate dimensions	4-1/2" x 8-1/4"
Weight:	29=375 lbs./58=485 lbs./68=535 lbs.		

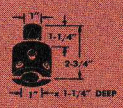
net prices

	29	58	68
With standard equipment	$275.00	$302.50	$357.50
Without standard equipment	258.50	286.00	341.00

foot press tooling



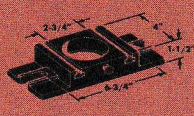
F8 PUNCH HOLDER
$8.25



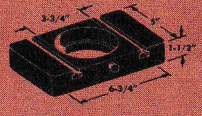
F28 PUNCH HOLDER
$12.10

No. 20 DIE ADAPTOR
$5.50

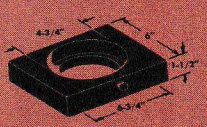
No. 40 DIE ADAPTOR
$5.50



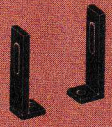
F 2-3/4" DIE SHOE
$13.75



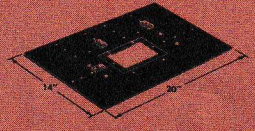
F 3-3/4" DIE SHOE
$24.20



F 4-3/4" DIE SHOE
$33.00



STRIPPER ARMS
$11.00



GAUGE WORK TABLE
$26.40

STRIPPER PLATES

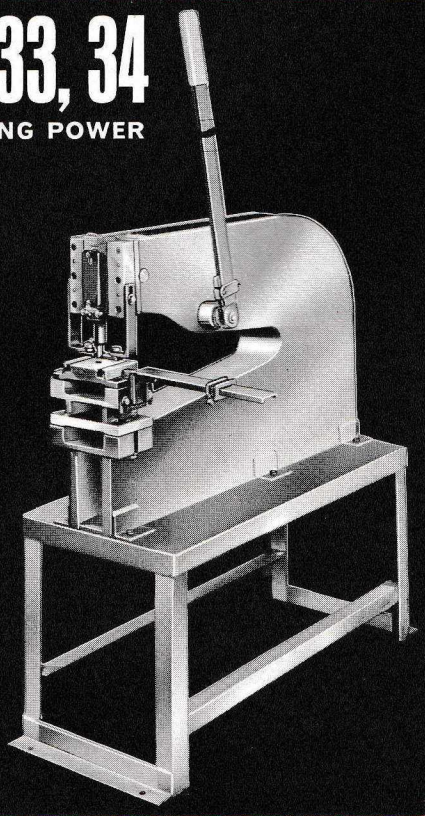
SIZE	CAPACITY	PRICE
A7	Punch size to 1/2"	$6.60
B7	Punch size to 1"	6.60
C7	Punch size to 2"	7.26
D7	Punch size to 3"	7.26
E7	Punch size to 4"	7.87

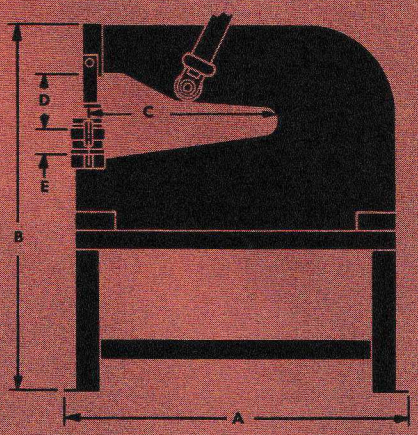
Order plates in accordance with punch size.

lever operated type

nos. 32, 33, 34

8 TONS PUNCHING POWER





dimensions

	32,	33,	34
A	25"	38"	44"
B	48"	48"	48"
C	10"	18"	24"
D	6"	6"	6"
E	4"	4"	4"

OVERALL WIDTH .... 18"

This group of lever operated presses offers power press capacities with manual press economy for prototype and short run work. Large throat openings accommodate a wide variety of sizes and shapes. Standard equipment includes: side gauge, depth gauge, F8 punch holder, F28 punch holder, No. 20 die adaptor, No. 40 die adaptor, F 2-3/4" O.D. die shoe, die shoe support, one set 1/2" round punch and die, 48" bar handle, one set stripper arms, A7 stripper plate.

punches and dies

A complete selection of punches and dies are available for 32, 33 and 34 presses. Pages 24 through 43 lists all sizes, shapes and prices.

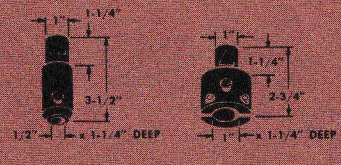
specifications 32, 33, 34

Capacity.....1/2" hole thru 3/16" mild steel/or 1-3/4" hole thru 12 ga.
Height of throat at ram.....10"
Length of stroke.....1"
Adjustment of ram.....3/4"
Bed plate holes (c to c).....6-3/4"
Dia. of punch shank hole in ram...1"
Depth: punch shank hole—ram 1-1/4"
Slug clearance.....3" x 5"
Weight: 32=345 lbs./33=570 lbs./34=735 lbs.

net prices

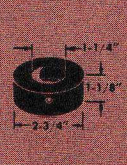
	32	33	34
With standard equipment	$330.00	$412.50	$467.50
Without standard equipment	313.50	396.00	451.00

lever press tooling

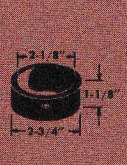


F8 PUNCH HOLDER $8.25

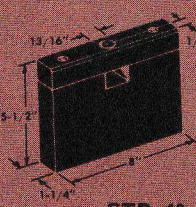
F28 PUNCH HOLDER $12.10



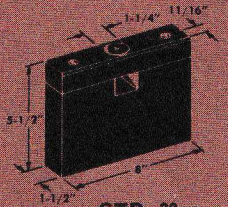
No. 20 DIE ADAPTOR $5.50



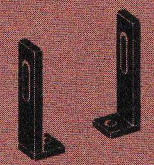
No. 40 DIE ADAPTOR $5.50



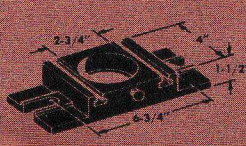
STD. 10 DIE SHOE $17.60



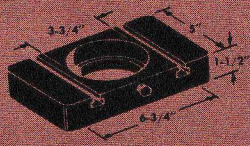
STD. 20 DIE SHOE $17.60



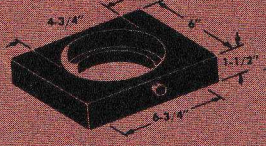
STRIPPER ARMS $11.00



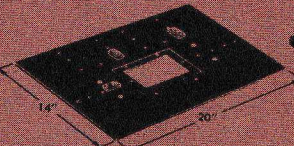
F 2-3/4 DIE SHOE $13.75



F 3-3/4 DIE SHOE $24.20



F 4-3/4 DIE SHOE $33.00



GAUGE WORK TABLE $26.40

STRIPPER PLATES

SIZE	CAPACITY	PRICE
A7	Punch size to 1/2"	$6.60
B7	Punch size to 1"	6.60
C7	Punch size to 2"	7.26
D7	Punch size to 3"	7.26
E7	Punch size to 4"	7.87

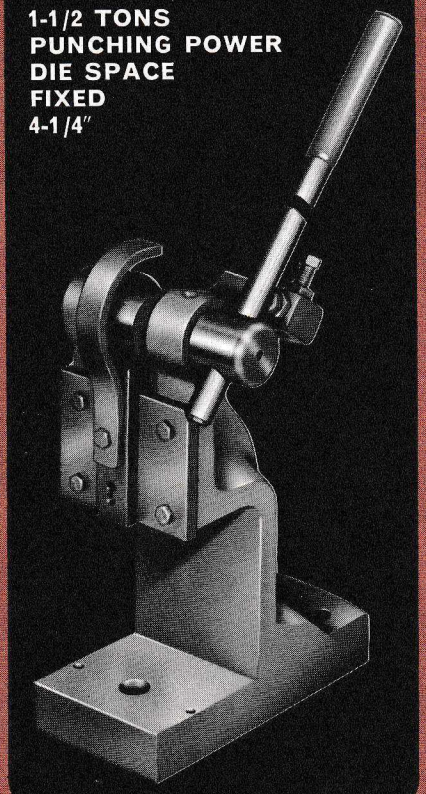
Order plates in accordance w/punch size.

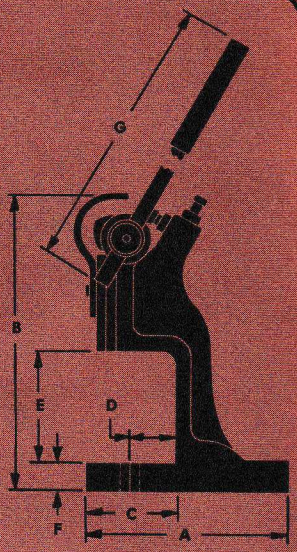
These multi-purpose presses perform a variety of metalworking operations including: punching, riveting, forming, sizing, upsetting, bending, drawing, staking, nibbling, assembling. A wide variety of sizes and types of punches and dies are accommodated. Stroke lengths can be adjusted with handle stops. On the No. 102 press, die space is adjustable from 1" to 14" and the cam operating mechanism pivots to any desired position.

marshalltown cam presses

no. 101

1-1/2 TONS PUNCHING POWER
DIE SPACE FIXED 4-1/4"





dimensions

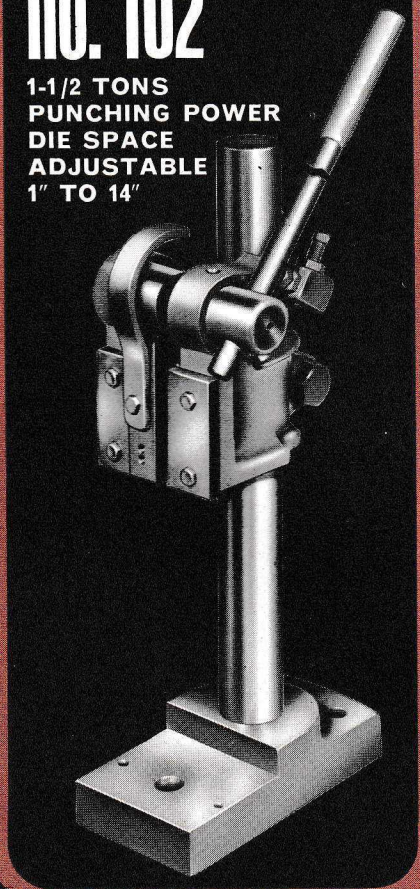
A.....8" E...4-1/4"
B...11-1/2" F...1-1/8"
C.....3-1/2" G.....16"
D.....2-1/8" Overall Width 4"
Die Shoe Holes (C to C) .3-1/4"

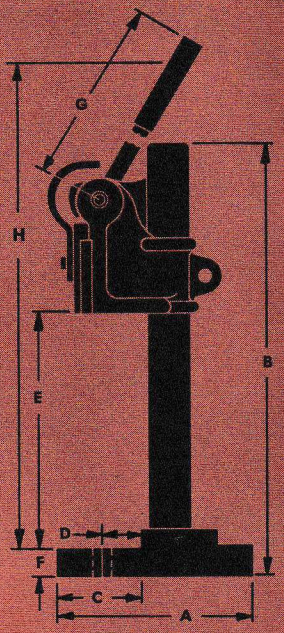
specifications

Stroke length 3/4"
Ram hole 3/8" Dia.
Weight 30 lbs.

no. 102

1-1/2 TONS PUNCHING POWER
DIE SPACE ADJUSTABLE 1" TO 14"





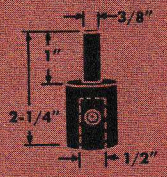
dimensions

A.....8" E...1" to 14"
B.....18" F...1-1/4"
C.....3-1/2" G.....16"
D.....2-1/8" H..21" at Max. height
Overall Width 4"
Die Shoe Holes (C to C) .3-1/4"

specifications

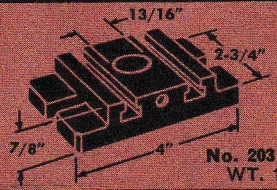
Stroke length 3/4"
Ram hole 3/8" Dia.
Weight 45 lbs.

cam press tooling



No. 205 PUNCH HOLDER
WT. 5 OZ.

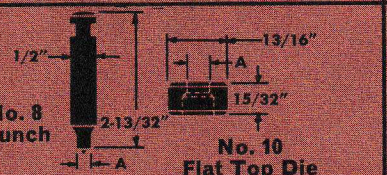
No. 204 GAUGE STRIPPER
WT. 5 OZ.



No. 203 DIE SHOE
WT. 1-1/2 LBS.

Net Prices F.O.B. Factory	
No. 101 Cam Press	$93.50
No. 102 Cam Press	121.00
No. 205 Punch Holder	8.47
No. 204 Gauge Stripper	6.05
No. 203 Die Shoe	9.08

Standard Round Punches & Dies



No. 8 Punch

No. 10 Flat Top Die

(A)	1/16"	5/32"	1/4"	11/32"	7/16"
	5/64"	11/64"	17/64"	23/64"	29/64"
	3/32"	3/16"	9/32"	3/8"	15/32"
	7/64"	13/64"	19/64"	25/64"	31/64"
	1/8"	7/32"	5/16"	13/32"	1/2"
	9/64"	15/64"	21/64"	27/64"	

Punch $1.21 Ea./Die $.94 Ea.

Drill Size Punches & Dies

Drill Sizes No. 52 thru Z

Punch $1.54 Ea.

Die $1.21 Ea.

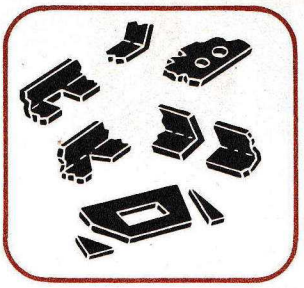
IRREGULAR SHAPED PUNCHES & DIES

Type M	Type N	Type P	Type R	Type S	Type T
(A) (B) 1/2 1/4	(A) (B) 3/8 1/4	(A) (B) 1/2 1/4	(A) 11/32	(A) 13/32	(A) 13/32
PUNCH $8.47 EA. DIE $6.38 EA.	PUNCH $7.26 EA. DIE $6.05 EA.	PUNCH $8.47 EA. DIE $6.38 EA.	PUNCH $6.05 EA. DIE $6.05 EA.	PUNCH $8.47 EA. DIE $6.38 EA.	PUNCH $8.47 EA. DIE $6.38 EA.

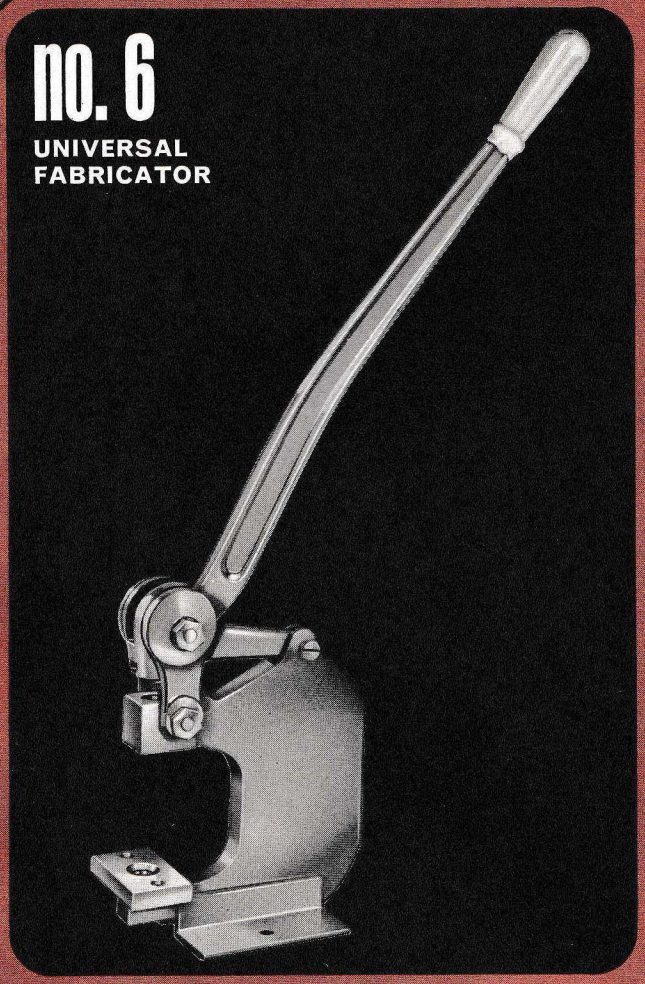
For any size not shown, add 25% to prices listed. If smallest dimension is less than 1/8", price quoted on application.

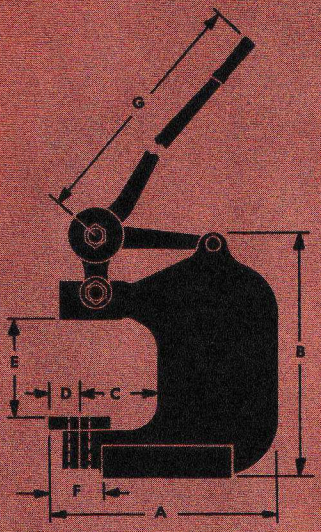
Six tools in one . . . punch, angle iron shear, bender, notcher, coper, scroll shear. Tooling is quickly and easily changed for each individual metalworking function. Roller bearing action provides smooth operation.

universal fabricator



no. 6
UNIVERSAL FABRICATOR



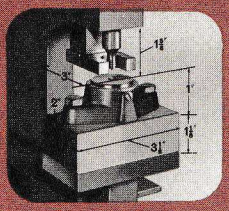


dimensions

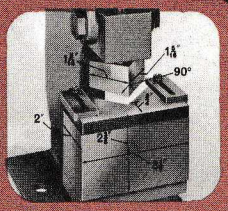
A	8-3/8″	E	3-3/4″
B	9-3/8″	F	2″
C	3″	G	24″
D	1″	Overall Width	5″

specifications

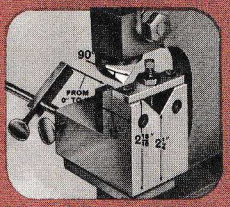
No. 6 Universal Fabricator	23 lbs.
No. 6P Punch Unit	3 lbs.
No. 6A Angle Shear Unit	7 lbs.
No. 6B Bender Unit	4 lbs.
No. 6N Notcher Unit	5 lbs.
No. 6C Coper Unit	5 lbs.
No. 6S Scroll Shear Unit	3 lbs.



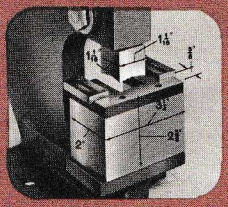
No. 6P PUNCH
Capacity: 9/16″ round hole thru 12 ga. mild steel. Uses No. 17 punch and No. 20 flat top die.



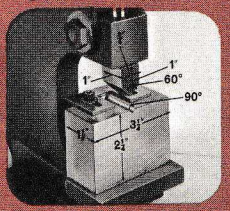
No. 6N 90° NOTCHER
Capacity: 16 ga. mild steel; 1″ x 1″ x 1/16″ angles.



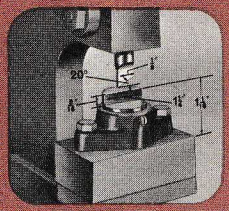
No. 6A ANGLE SHEAR
Capacity: 1″ x 1″ x 1/16″ mild steel angle iron.



No. 6C COPER
Capacity: 16 ga. mild steel; 1″ x 1″ x 1/16″ angles.



No. 6B 90° BENDER
Capacity mild steel: 1″ x 1″ x 1/16″ angles; 1″ x 1/16″ flats.

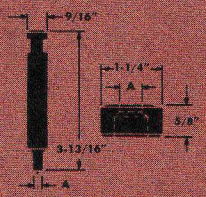


No. 6S SCROLL SHEAR
Capacity: 16 ga. mild steel.

Net Prices F.O.B. Factory	
No. 6 Universal Fabricator only	$60.50
No. 6P Punch Unit	24.20
No. 6A Angle Shear Unit	90.75
No. 6A Angle Shear Blade	18.15
No. 6A Angle Shear Die	24.20
No. 6B Bender Unit	42.35
No. 6B Bender Upper Die	18.15
No. 6B Bender Lower Die	24.20
No. 6N Notcher Unit	90.75
No. 6N Notcher Blade	18.15
No. 6N Notcher Die	24.20
No. 6C Coper Unit	90.75
No. 6C Coper Blade	18.15
No. 6C Coper Die	24.20
No. 6S Scroll Shear Unit	36.30
No. 6S Scroll Shear Blade	10.89
No. 6S Scroll Shear Die	10.89

Unit price does not include Universal Fabricator.

Standard Round Punches & Dies



No. 17 Punch **No. 20 Flat Top Die**

(A)	1/16″	11/64″	9/32″	25/64″	31/64″
	5/64″	3/16″	19/64″	13/32″	1/2″
	3/32″	13/64″	5/16″	27/64″	33/64″
	7/64″	7/32″	21/64″	7/16″	17/32″
	1/8″	15/64″	11/32″	29/64″	35/64″
	9/64″	1/4″	23/64″	15/32″	9/16″
	5/32″	17/64″	3/8″		

Punch $1.54 Ea./Die $1.54 Ea.

Drill Size Punches & Dies

Drill Sizes No. 52 thru Z

Punch $1.82 Ea.

Die $1.82 Ea.

IRREGULAR SHAPED PUNCHES & DIES

Type M	Type N	Type P	Type R	Type S	Type T
(A) (B)	(A) (B)	(A) (B)	(A)	(A)	(A)
1/2 1/8	1/2 1/8	1/2 1/4	1/8	15/32	15/32
9/16 1/8	1/2 3/16	9/16 3/8	3/16		
1/2 3/16	1/2 1/4		1/4		
9/16 3/16			5/16		
1/2 1/4			3/8		
9/16 1/4					
1/2 5/16					
9/16 5/16					
1/2 3/8					
9/16 3/8					
PUNCH $8.47 EA.	PUNCH $7.26 EA.	PUNCH $8.47 EA.	PUNCH $6.05 EA.	PUNCH $8.47 EA.	PUNCH $8.47 EA.
DIE $12.65 EA.	DIE $10.29 EA.	DIE $12.65 EA.	DIE $10.29 EA.	DIE $12.65 EA.	DIE $12.65 EA.

For any size not shown, add 25% to prices listed. If smallest dimension is less than 1/8″, price quoted on application.

punches and dies

The punches and dies listed on pages 25 through 42 are for use with the following Roper Whitney equipment:
MANUALLY OPERATED PUNCHES — Model Nos. 15, 811, 027, 118, 218.
FOOT OPERATED PRESSES — Model Nos. 29, 58, 68.
LEVER OPERATED PRESSES — Model Nos. 32, 33, 34.
POWER PUNCH PRESSES — Model Nos. 127, 129, 130, 150, 230, 231, 331, 336.

ordering information

When ordering or requesting a quotation for punches and dies, be sure to include the following information:

Type and thickness of material, so proper clearance can be incorporated. Make and model number of the machine on which the punches and dies will be used.

Punches and dies as shown on the following pages are stocked for 14 gauge or lighter mild steel. For 13 gauge to 1/4" mild steel, add 20%; 1/4" or thicker mild steel, add 30% to die price.

If punches are required with punch point concentric with the punch shank, add $1.00 to the ROUND punches, $3.00 to the IRREGULAR SHAPED punches.

If dies are required with hole concentric with the O.D. of the dies, add $1.00 to the price of the ROUND dies, $3.00 to the IRREGULAR SHAPED dies.

If size wanted is not shown, use price of next largest size and add 25%.

punching rules

1. The thickness of the metal to be punched must not exceed the diameter of the punch.

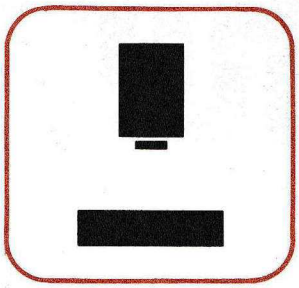
2. If it is desirable to retain and use the punched blank, the punch face must be flat.

3. As a lubricant when perforating mild steel, we suggest sulphurized oil or lard oil. When perforating brass, we suggest paraffin base oils. When perforating stainless steel, we suggest sulphurized oil diluted with paraffin.

clearance chart for steel

Gauge	Approx. Thickness	Overall Clearance Add to Punch Size	Gauge	Approx. Thickness	Overall Clearance Add to Punch Size
30	.0120	Slip fit	17	.0538	.005
29	.0135	Slip fit	16	.0598	.005
28	.0149	Slip fit	15	.0673	.007
27	.0164	Slip fit	14	.0747	.007
26	.0179	Slip fit	13	.0897	.008
25	.0209	.002	12	.1046	.010
24	.0239	.002	11	.1196	.010
23	.0269	.002	10	.1345	.013
22	.0299	.003	9	.1494	1/64
21	.0329	.003	8	.1644	1/64
20	.0359	.004	7	.1793	.025
19	.0418	.004	1/4" plate	....	.037
18	.0478	.005	1/2" plate	....	5/64

Note: Stainless steel and non-ferrous materials require one-half the above clearances.



rounds

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1/16″	No. 8	$1.21	No. 20	$1.54	$2.75
5/64″	No. 8	1.21	No. 20	1.54	2.75
3/32″	No. 8	1.21	No. 20	1.54	2.75
7/64″	No. 8	1.21	No. 20	1.54	2.75
1/8″	No. 8	1.21	No. 20	1.54	2.75
9/64″	No. 8	1.21	No. 20	1.54	2.75
5/32″	No. 8	1.21	No. 20	1.54	2.75
11/64″	No. 8	1.21	No. 20	1.54	2.75
3/16″	No. 8	1.21	No. 20	1.54	2.75
13/64″	No. 8	1.21	No. 20	1.54	2.75
7/32″	No. 8	1.21	No. 20	1.54	2.75
15/64″	No. 8	1.21	No. 20	1.54	2.75
1/4″	No. 8	1.21	No. 20	1.54	2.75
17/64″	No. 8	1.21	No. 20	1.54	2.75
9/32″	No. 8	1.21	No. 20	1.54	2.75
19/64″	No. 8	1.21	No. 20	1.54	2.75
5/16″	No. 8	1.21	No. 20	1.54	2.75
21/64″	No. 8	1.21	No. 20	1.54	2.75
11/32″	No. 8	1.21	No. 20	1.54	2.75
23/64″	No. 8	1.21	No. 20	1.54	2.75
3/8″	No. 8	1.21	No. 20	1.54	2.75
25/64″	No. 8	1.21	No. 20	1.54	2.75
13/32″	No. 8	1.21	No. 20	1.54	2.75
27/64″	No. 8	1.21	No. 20	1.54	2.75
7/16″	No. 8	1.21	No. 20	1.54	2.75
29/64″	No. 8	1.21	No. 20	1.54	2.75
15/32″	No. 8	1.21	No. 20	1.54	2.75
31/64″	No. 8	1.21	No. 20	1.54	2.75
1/2″	No. 8	1.21	No. 20	1.54	2.75
33/64″	No. 28	3.03	No. 20	1.54	4.57
17/32″	No. 28	3.03	No. 20	1.54	4.57
35/64″	No. 28	3.03	No. 20	1.54	4.57
9/16″	No. 28	3.03	No. 20	1.54	4.57
37/64″	No. 28	3.03	No. 20	1.54	4.57
19/32″	No. 28	3.03	No. 20	1.54	4.57
39/64″	No. 28	3.03	No. 20	1.54	4.57
5/8″	No. 28	3.03	No. 20	1.54	4.57
41/64″	No. 28	3.63	No. 20	1.54	5.17
21/32″	No. 28	3.63	No. 20	1.54	5.17
43/64″	No. 28	3.63	No. 20	1.54	5.17
11/16″	No. 28	3.63	No. 20	1.54	5.17
45/64″	No. 28	3.63	No. 20	1.54	5.17
23/32″	No. 28	3.63	No. 20	1.54	5.17
47/64″	No. 28	3.63	No. 20	1.54	5.17
3/4″	No. 28	3.63	No. 20	2.42	6.05
49/64″	No. 28	3.63	No. 20	2.42	6.05
25/32″	No. 28	3.63	No. 20	2.42	6.05
51/64″	No. 28	3.63	No. 20	2.42	6.05
13/16″	No. 28	3.63	No. 20	2.42	6.05
53/64″	No. 28	3.63	No. 40	4.84	8.47
27/32″	No. 28	3.63	No. 40	4.84	8.47
55/64″	No. 28	3.63	No. 40	4.84	8.47
7/8″	No. 28	3.63	No. 40	4.84	8.47
57/64″	No. 28	3.63	No. 40	4.84	8.47
29/32″	No. 28	3.63	No. 40	4.84	8.47
59/64″	No. 28	3.63	No. 40	4.84	8.47
15/16″	No. 28	3.63	No. 40	4.84	8.47
61/64″	No. 28	3.63	No. 40	4.84	8.47

rounds

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
31/32″	No. 28	$3.63	No. 40	$4.84	$8.47
63/64″	No. 28	3.63	No. 40	4.84	8.47
1″	No. 28	4.24	No. 40	4.84	9.08
1-1/64″	No. 28	4.24	No. 40	4.84	9.08
1-1/32″	No. 28	4.24	No. 40	4.84	9.08
1-3/64″	No. 28	4.24	No. 40	4.84	9.08
1-1/16″	No. 28	4.24	No. 40	4.84	9.08
1-5/64″	No. 28	4.24	No. 40	4.84	9.08
1-3/32″	No. 28	4.24	No. 40	4.84	9.08
1-7/64″	No. 28	4.24	No. 40	4.84	9.08
1-1/8″	No. 28	4.24	No. 40	4.84	9.08
1-9/64″	No. 28	4.24	No. 40	4.84	9.08
1-5/32″	No. 28	4.24	No. 40	4.84	9.08
1-11/64″	No. 28	4.24	No. 40	4.84	9.08
1-3/16″	No. 28	4.24	No. 40	4.84	9.08
1-13/64″	No. 28	4.24	No. 40	4.84	9.08
1-7/32″	No. 28	4.24	No. 40	4.84	9.08
1-15/64″	No. 28	4.24	No. 40	4.84	9.08
1-1/4″	No. 28	6.05	No. 40	4.84	10.89
1-17/64″	No. 28	6.05	No. 40	4.84	10.89
1-9/32″	No. 28	6.05	No. 40	4.84	10.89
1-19/64″	No. 28	6.05	No. 40	4.84	10.89
1-5/16″	No. 28	6.05	No. 40	4.84	10.89
1-21/64″	No. 28	6.05	No. 40	4.84	10.89
1-11/32″	No. 28	6.05	No. 40	4.84	10.89
1-23/64″	No. 28	6.05	No. 40	4.84	10.89
1-3/8″	No. 28	6.05	No. 40	4.84	10.89
1-25/64″	No. 28	6.05	No. 40	4.84	10.89
1-13/32″	No. 28	6.05	No. 40	4.84	10.89
1-27/64″	No. 28	6.05	No. 40	4.84	10.89
1-7/16″	No. 28	6.05	No. 40	4.84	10.89
1-29/64″	No. 28	6.05	No. 40	4.84	10.89
1-15/32″	No. 28	6.05	No. 28—2-3/4	5.45	11.50
1-31/64″	No. 28	6.05	No. 28—2-3/4	5.45	11.50
1-1/2″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-33/64″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-17/32″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-35/64″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-9/16″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-37/64″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-19/32″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-39/64″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-5/8″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-41/64″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-21/32″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-43/64″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-11/16″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-45/64″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-23/32″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-47/64″	No. 28	7.26	No. 28—2-3/4	5.45	12.71
1-3/4″	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-49/64″	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-25/32″	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-51/64″	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-13/16″	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-53/64″	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-27/32″	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-55/64″	No. 28	7.87	No. 28—2-3/4	5.45	13.32

rounds

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1-7/8"	No. 28	$7.87	No. 28—2-3/4	$ 5.45	$13.32
1-57/64"	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-29/32"	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-59/64"	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-15/16"	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-61/64"	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-31/32"	No. 28	7.87	No. 28—2-3/4	5.45	13.32
1-63/64"	No. 28	7.87	No. 28—2-3/4	5.45	13.32
2"	No. 28	9.68	No. 28—2-3/4	5.45	15.13
2-1/32"	No. 28	9.68	No. 28—3-3/4	10.29	19.97
2-1/16"	No. 28	9.68	No. 28—3-3/4	10.29	19.97
2-1/8"	No. 28	9.68	No. 28—3-3/4	10.29	19.97
2-3/16"	No. 28	9.68	No. 28—3-3/4	10.29	19.97
2-1/4"	No. 28	10.29	No. 28—3-3/4	10.29	20.58
2-5/16"	No. 28	10.29	No. 28—3-3/4	10.29	20.58
2-3/8"	No. 28	10.29	No. 28—3-3/4	10.29	20.58
2-7/16"	No. 28	10.29	No. 28—3-3/4	10.29	20.58
2-1/2"	No. 28	10.89	No. 28—3-3/4	10.29	21.18
2-9/16"	No. 28	10.89	No. 28—3-3/4	10.29	21.18
2-5/8"	No. 28	10.89	No. 28—3-3/4	10.29	21.18
2-11/16"	No. 28	10.89	No. 28—3-3/4	10.29	21.18
2-3/4"	No. 28	11.50	No. 28—3-3/4	10.29	21.79
2-13/16"	No. 28	11.50	No. 28—3-3/4	10.29	21.79
2-7/8"	No. 28	11.50	No. 28—3-3/4	10.29	21.79
2-15/16"	No. 28	11.50	No. 28—3-3/4	10.29	21.79
3"	No. 28	12.10	No. 28—3-3/4	10.29	22.39
3-1/32"	No. 28	12.10	No. 28—4-3/4	16.34	28.44
3-1/16"	No. 28	12.10	No. 28—4-3/4	16.34	28.44
3-1/8"	No. 28	12.10	No. 28—4-3/4	16.34	28.44
3-3/16"	No. 28	12.10	No. 28—4-3/4	16.34	28.44
3-1/4"	No. 28	12.71	No. 28—4-3/4	16.34	29.05
3-5/16"	No. 28	12.71	No. 28—4-3/4	16.34	29.05
3-3/8"	No. 28	12.71	No. 28—4-3/4	16.34	29.05
3-7/16"	No. 28	12.71	No. 28—4-3/4	16.34	29.05
3-1/2"	No. 28	13.31	No. 28—4-3/4	16.34	29.65
3-9/16"	No. 28	13.31	No. 28—4-3/4	16.34	29.65
3-5/8"	No. 28	13.31	No. 28—4-3/4	16.34	29.65
3-11/16"	No. 28	13.31	No. 28—4-3/4	16.34	29.65
3-3/4"	No. 28	13.92	No. 28—4-3/4	16.34	30.26
3-13/16"	No. 28	13.92	No. 28—4-3/4	16.34	30.26
3-7/8"	No. 28	13.92	No. 28—4-3/4	16.34	30.26
3-15/16"	No. 28	13.92	No. 28—4-3/4	16.34	30.26
4"	No. 28	16.34	No. 28—4-3/4	16.34	32.68
4-1/16"	No. 28—1-9/16	60.50	No. 28—5-3/4	42.35	102.85
	No. 28—2	72.60	No. 28—5-3/4	42.35	114.95
4-1/8"	No. 28—1-9/16	60.50	No. 28—5-3/4	42.35	102.85
	No. 28—2	72.60	No. 28—5-3/4	42.35	114.95
4-3/16"	No. 28—1-9/16	60.50	No. 28—5-3/4	42.35	102.85
	No. 28—2	72.60	No. 28—5-3/4	42.35	114.95
4-1/4"	No. 28—1-9/16	66.55	No. 28—5-3/4	42.35	108.90
	No. 28—2	78.65	No. 28—5-3/4	42.35	121.00
4-5/16"	No. 28—1-9/16	66.55	No. 28—5-3/4	45.38	111.93
	No. 28—2	78.65	No. 28—5-3/4	45.38	124.03
4-3/8"	No. 28—1-9/16	66.55	No. 28—5-3/4	45.38	111.93
	No. 28—2	78.65	No. 28—5-3/4	45.38	124.03
4-7/16"	No. 28—1-9/16	66.55	No. 28—5-3/4	45.38	111.93
	No. 28—2	78.65	No. 28—5-3/4	45.38	124.03

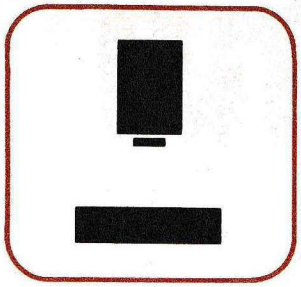
rounds

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
4-1/2"	No. 28—1-9/16	$72.60	No. 28—5-3/4	$45.38	$117.98
	No. 28—2	84.70	No. 28—5-3/4	45.38	130.08
4-9/16"	No. 28—1-9/16	72.60	No. 28—5-3/4	48.40	121.00
	No. 28—2	84.70	No. 28—5-3/4	48.40	133.10
4-5/8"	No. 28—1-9/16	72.60	No. 28—5-3/4	48.40	121.00
	No. 28—2	84.70	No. 28—5-3/4	48.40	133.10
4-11/16"	No. 28—1-9/16	72.60	No. 28—5-3/4	48.40	121.00
	No. 28—2	84.70	No. 28—5-3/4	48.40	133.10
4-3/4"	No. 28—1-9/16	78.65	No. 28—5-3/4	48.40	127.05
	No. 28—2	90.75	No. 28—5-3/4	48.40	139.15
4-13/16"	No. 28—1-9/16	78.65	No. 28—6-3/4	51.43	130.08
	No. 28—2	90.75	No. 28—6-3/4	51.43	142.18
4-7/8"	No. 28—1-9/16	78.65	No. 28—6-3/4	51.43	130.08
	No. 28—2	90.75	No. 28—6-3/4	51.43	142.18
4-15/16"	No. 28—1-9/16	78.65	No. 28—6-3/4	51.43	130.08
	No. 28—2	90.75	No. 28—6-3/4	51.43	142.18
5"	No. 28—1-9/16	84.70	No. 28—6-3/4	51.43	136.13
	No. 28—2	96.80	No. 28—6-3/4	51.43	148.23
5-1/8"	No. 28—1-9/16	84.70	No. 28—6-3/4	54.45	139.15
	No. 28—2	96.80	No. 28—6-3/4	54.45	151.25
5-1/4"	No. 28—1-9/16	90.75	No. 28—6-3/4	54.45	145.20
	No. 28—2	102.85	No. 28—6-3/4	54.45	157.30
5-3/8"	No. 28—1-9/16	90.75	No. 28—6-3/4	57.48	148.23
	No. 28—2	102.85	No. 28—6-3/4	57.48	160.33
5-1/2"	No. 28—1-9/16	96.80	No. 28—6-3/4	57.48	154.28
	No. 28—2	108.90	No. 28—6-3/4	57.48	166.38
5-5/8"	No. 28—1-9/16	96.80	No. 28—6-3/4	60.50	157.30
	No. 28—2	108.90	No. 28—6-3/4	60.50	169.40
5-3/4"	No. 28—1-9/16	102.85	No. 28—6-3/4	60.50	163.35
	No. 28—2	114.95	No. 28—6-3/4	60.50	175.45
5-7/8"	No. 28—1-9/16	102.85		133.10	235.95
	No. 28—2	114.95		133.10	248.05
6"	No. 28—1-9/16	108.35		133.10	241.45
	No. 28—2	122.38		133.10	255.48

THE FOLLOWING ARE AVAILABLE BUT NOT STOCKED:

6-1/8"	No. 28—1-9/16	$108.35	DIE & DIE SHOE ONE UNIT. STATE PRESS TO BE USED WITH.	$146.85	$255.20
	No. 28—2	122.38		146.85	269.23
6-1/4"	No. 28—1-9/16	113.85		146.85	260.70
	No. 28—2	129.80		146.85	276.65
6-3/8"	No. 28—1-9/16	113.85		146.85	260.70
	No. 28—2	129.80		146.85	276.65
6-1/2"	No. 28—1-9/16	119.35		146.85	266.20
	No. 28—2	137.23		146.85	284.08
6-5/8"	No. 28—1-9/16	119.35		160.33	279.68
	No. 28—2	137.23		160.33	297.56
6-3/4"	No. 28—1-9/16	124.85		160.33	285.18
	No. 28—2	144.38		160.33	304.71
6-7/8"	No. 28—1-9/16	124.85		160.33	285.18
	No. 28—2	144.38		160.33	304.71
7"	No. 28—1-9/16	128.98		160.33	289.31
	No. 28—2	151.80		160.33	312.13
7-1/8"	No. 28—1-9/16	128.98		174.08	303.06
	No. 28—2	151.80		174.08	325.88
7-1/4"	No. 28—1-9/16	135.58		174.08	309.66
	No. 28—2	159.23		174.08	333.31

punches and dies



rounds

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
7-3/8"	No. 28—1-9/16	$135.58	DIE & DIE SHOE ONE UNIT. STATE PRESS TO BE USED WITH.	$174.08	$309.66
	No. 28—2	159.23		174.08	333.31
7-1/2"	No. 28—1-9/16	141.08		174.08	315.16
	No.28—2	166.65		174.08	340.73
7-5/8"	No. 28—1-9/16	141.08		187.55	328.63
	No. 28—2	166.65		187.55	354.20
7-3/4"	No. 28—1-9/16	146.30		187.55	333.85
	No. 28—2	174.08		187.55	361.63
7-7/8"	No. 28—1-9/16	146.30		187.55	333.85
	No. 28—2	174.08		187.55	361.63
8"	No. 28—1-9/16	151.25		187.55	338.80
	No. 28—2	181.50		187.55	369.05

drill size

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
A thru 60	No. 8	$1.54	No. 20	$1.82	$3.36

type m

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1/16" x 1/2"	No. 8	$12.71	No.20	$16.94	$29.65
1/16" x 3/4"	No. 28	13.31	No. 40	19.36	32.67
1/16" x 1"	No. 28	15.73	No. 40	19.36	35.09
1/16" x 1-1/32"	No. 28	15.73	No. 40	19.36	35.09
1/16" x 2"	No. 28	20.57	No. 28—2-3/4	26.62	47.19
1/16" x 2-1/32"	No. 28	20.57	No. 28—2-3/4	26.62	47.19
3/32" x 1/4"	No. 8	12.71	No. 20	16.94	29.65
3/32" x 3/8"	No. 8	12.71	No. 20	16.94	29.65
3/32" x 1/2"	No. 8	12.71	No. 20	16.94	29.65
3/32" x 5/8"	No. 28	13.31	No. 20	16.94	30.25
3/32" x 3/4"	No. 28	13.31	No. 40	19.36	32.67
3/32" x 7/8"	No. 28	13.31	No. 40	19.36	32.67
3/32" x 1"	No. 28	15.73	No. 40	19.36	35.09
3/32" x 1-1/32"	No. 28	15.73	No. 40	19.36	35.09
1/8" x 3/16"	No. 8	8.47	No. 20	12.71	21.18
1/8" x 1/4"	No. 8	8.47	No. 20	12.71	21.18
1/8" x 5/16"	No. 8	8.47	No. 20	12.71	21.18
1/8" x 3/8"	No. 8	8.47	No. 20	12.71	21.18
1/8" x 7/16"	No. 8	8.47	No. 20	12.71	21.18
1/8" x 1/2"	No. 8	8.47	No. 20	12.71	21.18
1/8" x 9/16"	No. 28	9.68	No. 20	12.71	22.39
1/8" x 5/8"	No. 28	9.68	No. 20	12.71	22.39
1/8" x 11/16"	No. 28	9.68	No. 20	12.71	22.39
1/8" x 3/4"	No. 28	9.68	No. 40	16.34	26.02
1/8" x 13/16"	No. 28	9.68	No. 40	16.34	26.02
1/8" x 7/8"	No. 28	9.68	No. 40	16.34	26.02
1/8" x 15/16"	No. 28	9.68	No. 40	16.34	26.02
1/8" x 1"	No. 28	10.89	No. 40	16.34	27.23
1/8" x 1-1/32"	No. 28	10.89	No. 40	16.34	27.23
1/8" x 1-1/4"	No. 28	12.71	No. 28—2-3/4	20.57	33.28

type m

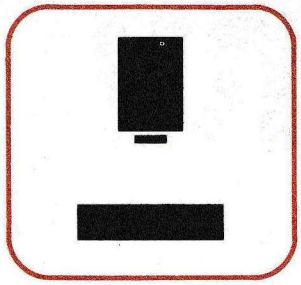
Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1/8" x 1-1/2"	No. 28	$13.31	No. 28—2-3/4	$20.57	$33.88
1/8" x 1-3/4"	No. 28	14.52	No. 28—2-3/4	20.57	35.09
1/8" x 2"	No. 28	16.34	No. 28—2-3/4	20.57	36.91
5/32" x 1/4"	No. 8	8.47	No. 20	12.71	21.18
5/32" x 3/8"	No. 8	8.47	No. 20	12.71	21.18
5/32" x 1/2"	No. 8	8.47	No. 20	12.71	21.18
5/32" x 5/8"	No. 28	9.68	No. 20	12.71	22.39
5/32" x 3/4"	No. 28	9.68	No. 40	16.34	26.02
5/32" x 7/8"	No. 28	9.68	No. 40	16.34	26.02
5/32" x 1"	No. 28	10.89	No. 40	16.34	27.23
5/32" x 1-1/32"	No. 28	10.89	No. 40	16.34	27.23
3/16" x 1/4"	No. 8	8.47	No. 20	12.71	21.18
3/16" x 5/16"	No. 8	8.47	No. 20	12.71	21.18
3/16" x 3/8"	No. 8	8.47	No. 20	12.71	21.18
3/16" x 7/16"	No. 8	8.47	No. 20	12.71	21.18
3/16" x 1/2"	No. 8	8.47	No. 20	12.71	21.18
3/16" x 9/16"	No. 28	9.68	No. 20	12.71	22.39
3/16" x 5/8"	No. 28	9.68	No. 20	12.71	22.39
3/16" x 11/16"	No. 28	9.68	No. 20	12.71	22.39
3/16" x 3/4"	No. 28	9.68	No. 40	16.34	26.02
3/16" x 13/16"	No. 28	9.68	No. 40	16.34	26.02
3/16" x 7/8"	No. 28	9.68	No. 40	16.34	26.02
3/16" x 15/16"	No. 28	9.68	No. 40	16.34	26.02
3/16" x 1"	No. 28	10.89	No. 40	16.34	27.23
3/16" x 1-1/32"	No. 28	10.89	No. 40	16.34	27.23
3/16" x 1-1/4"	No. 28	12.71	No. 28—2-3/4	20.57	33.28
3/16" x 1-1/2"	No. 28	13.31	No. 28—2-3/4	20.57	33.88
3/16" x 1-3/4"	No. 28	14.52	No. 28—2-3/4	20.57	35.09
3/16" x 2"	No. 28	16.34	No. 28—2-3/4	20.57	36.91
7/32" x 1/4"	No. 8	8.47	No. 20	12.71	21.18
7/32" x 3/8"	No. 8	8.47	No. 20	12.71	21.18
7/32" x 1/2"	No. 8	8.47	No. 20	12.71	21.18
7/32" x 5/8"	No. 28	9.68	No. 20	12.71	22.39
7/32" x 3/4"	No. 28	9.68	No. 40	16.34	26.02
7/32" x 7/8"	No. 28	9.68	No. 40	16.34	26.02
7/32" x 1"	No. 28	10.89	No. 40	16.34	27.23
7/32" x 1-1/32"	No. 28	10.89	No. 40	16.34	27.23
1/4" x 5/16"	No. 8	8.47	No. 20	12.71	21.18
1/4" x 3/8"	No. 8	8.47	No. 20	12.71	21.18
1/4" x 7/16"	No. 8	8.47	No. 20	12.71	21.18
1/4" x 1/2"	No. 8	8.47	No. 20	12.71	21.18
1/4" x 9/16"	No. 28	9.68	No. 20	12.71	22.39
1/4" x 5/8"	No. 28	9.68	No. 20	12.71	22.39
1/4" x 11/16"	No. 28	9.68	No. 20	12.71	22.39
1/4" x 3/4"	No. 28	9.68	No. 40	16.34	26.02
1/4" x 13/16"	No. 28	9.68	No. 40	16.34	26.02
1/4" x 7/8"	No. 28	9.68	No. 40	16.34	26.02
1/4" x 15/16"	No. 28	9.68	No. 40	16.34	26.02
1/4" x 1"	No. 28	10.89	No. 40	16.34	27.23
1/4" x 1-1/32"	No. 28	10.89	No. 40	16.34	27.23
1/4" x 1-1/4"	No. 28	12.71	No. 28—2-3/4	20.57	33.28
1/4" x 1-1/2"	No. 28	13.31	No. 28—2-3/4	20.57	33.88
1/4" x 1-3/4"	No. 28	14.52	No. 28—2-3/4	20.57	35.09
1/4" x 2"	No. 28	16.34	No. 28—2-3/4	20.57	36.91
9/32" x 3/8"	No. 8	8.47	No. 20	12.71	21.18
9/32" x 1/2"	No. 8	8.47	No. 20	12.71	21.18
9/32" x 5/8"	No. 28	9.68	No. 20	12.71	22.39
9/32" x 3/4"	No. 28	9.68	No. 40	16.34	26.02

type m

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
9/32″ x 7/8″	No. 28	$9.68	No. 40	$16.34	$26.02
9/32″ x 1″	No. 28	10.89	No. 40	16.34	27.23
9/32″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
5/16″ x 3/8″	No. 8	8.47	No. 20	12.71	21.18
5/16″ x 7/16″	No. 8	8.47	No. 20	12.71	21.18
5/16″ x 1/2″	No. 8	8.47	No. 20	12.71	21.18
5/16″ x 9/16″	No. 28	9.68	No. 20	12.71	22.39
5/16″ x 5/8″	No. 28	9.68	No. 20	12.71	22.39
5/16″ x 11/16″	No. 28	9.68	No. 20	12.71	22.39
5/16″ x 3/4″	No. 28	9.68	No. 40	16.34	26.02
5/16″ x 13/16″	No. 28	9.68	No. 40	16.34	26.02
5/16″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
5/16″ x 15/16″	No. 28	9.68	No. 40	16.34	26.02
5/16″ x 1″	No. 28	10.89	No. 40	16.34	27.23
5/16″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
5/16″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
5/16″ x 1-1/2″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
5/16″ x 1-3/4″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
5/16″ x 2″	No. 28	16.34	No. 28—2-3/4	20.57	36.91
11/32″ x 3/8″	No. 8	8.47	No. 20	12.71	21.18
11/32″ x 1/2″	No. 28	9.68	No. 20	12.71	22.39
11/32 x 5/8	No. 28	9.68	No. 20	12.71	22.39
11/32 x 3/4″	No. 28	9.68	No. 40	16.34	26.02
11/32″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
11/32″ x 1″	No. 28	10.89	No. 40	16.34	27.23
11/32″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
3/8″ x 7/16″	No. 28	9.68	No. 20	12.71	22.39
3/8″ x 1/2″	No. 28	9.68	No. 20	12.71	22.39
3/8″ x 9/16″	No. 28	9.68	No. 20	12.71	22.39
3/8″ x 5/8″	No. 28	9.68	No. 20	12.71	22.39
3/8″ x 11/16″	No. 28	9.68	No. 20	12.71	22.39
3/8″ x 3/4″	No. 28	9.68	No. 40	16.34	26.02
3/8″ x 13/16″	No. 28	9.68	No. 40	16.34	26.02
3/8″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
3/8″ x 15/16″	No. 28	9.68	No. 40	16.34	26.02
3/8″ x 1″	No. 28	10.89	No. 40	16.34	27.23
3/8″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
3/8″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
3/8″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
3/8″ x 1-3/4″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
3/8″ x 2″	No. 28	16.34	No. 28—2-3/4	20.57	36.91
13/32″ x 3/4″	No. 28	9.68	No. 40	16.34	26.02
13/32″ x 13/16″	No. 28	9.68	No. 40	16.34	26.02
13/32″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
13/32″ x 1″	No. 28	10.89	No. 40	16.34	27.23
13/32″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
7/16″ x 1/2″	No. 28	9.68	No. 20	12.71	22.39
7/16″ x 9/16″	No. 28	9.68	No. 20	12.71	22.39
7/16″ x 5/8″	No. 28	9.68	No. 20	12.71	22.39
7/16″ x 11/16″	No. 28	9.68	No. 20	12.71	22.39
7/16″ x 3/4″	No. 28	9.68	No. 40	16.34	26.02
7/16″ x 13/16″	No. 28	9.68	No. 40	16.34	26.02
7/16″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
7/16″ x 15/16″	No. 28	9.68	No. 40	16.34	26.02
7/16″ x 1″	No. 28	10.89	No. 40	16.34	27.23
7/16″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
7/16″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
7/16″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88

type m

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
7/16″ x 1-3/4″	No. 28	$14.52	No. 28—2-3/4	$20.57	$35.09
7/16″ x 2″	No. 28	16.34	No. 28—2-3/4	20.57	36.91
1/2″ x 9/16″	No. 28	9.68	No. 20	12.71	22.39
1/2″ x 5/8″	No. 28	9.68	No. 20	12.71	22.39
1/2″ x 11/16″	No. 28	9.68	No. 20	12.71	22.39
1/2″ x 3/4″	No. 28	9.68	No. 40	16.34	26.02
1/2″ x 13/16″	No. 28	9.68	No. 40	16.34	26.02
1/2″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
1/2″ x 15/16″	No. 28	9.68	No. 40	16.34	26.02
1/2″ x 1″	No. 28	10.89	No. 40	16.34	27.23
1/2″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
1/2″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
1/2″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
1/2″ x 1-3/4″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
1/2″ x 2″	No. 28	16.34	No. 28—2-3/4	20.57	36.91
17/32″ x 3/4″	No. 28	9.68	No. 40	16.34	26.02
17/32″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
17/32″ x 1″	No. 28	10.89	No. 40	16.34	27.23
17/32″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
17/32″ x 1-9/32″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
17/32″ x 1-11/32″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
17/32″ x 1-13/32″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
17/32″ x 1-15/32″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
17/32″ x 1-17/32″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
9/16″ x 5/8″	No. 28	9.68	No. 20	12.71	22.39
9/16″ x 11/16″	No. 28	9.68	No. 20	12.71	22.39
9/16″ x 3/4″	No. 28	9.68	No. 40	16.34	26.02
9/16″ x 13/16″	No. 28	9.68	No. 40	16.34	26.02
9/16″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
9/16″ x 15/16″	No. 28	9.68	No. 40	16.34	26.02
9/16″ x 1″	No. 28	10.89	No. 40	16.34	27.23
9/16″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
9/16″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
9/16″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
9/16″ x 1-3/4″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
9/16″ x 2″	No. 28	16.34	No. 28—2-3/4	20.57	36.91
5/8″ x 11/16″	No. 28	9.68	No. 40	16.34	26.02
5/8″ x 3/4″	No. 28	9.68	No. 40	16.34	26.02
5/8″ x 13/16″	No. 28	9.68	No. 40	16.34	26.02
5/8″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
5/8″ x 15/16″	No. 28	9.68	No. 40	16.34	26.02
5/8″ x 1″	No. 28	10.89	No. 40	16.34	27.23
5/8″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
5/8″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
5/8″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
5/8″ x 1-3/4″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
5/8″ x 2″	No. 28	16.34	No. 28—2-3/4	20.57	36.91
11/16″ x 3/4″	No. 28	9.68	No. 40	16.34	26.02
11/16″ x 13/16″	No. 28	9.68	No. 40	16.34	26.02
11/16″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
11/16″ x 15/16″	No. 28	9.68	No. 40	16.94	26.02
11/16″ x 1″	No. 28	10.89	No. 40	16.34	27.23
11/16″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
11/16″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
11/16″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
11/16″ x 1-3/4″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
11/16″ x 2″	No. 28	16.34	No. 28—2-3/4	20.57	36.91
3/4″ x 13/16″	No. 28	9.68	No. 40	16.34	26.02



type m

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
3/4″ x 7/8″	No. 28	$9.68	No. 40	$16.34	$26.02
3/4″ x 15/16″	No. 28	9.68	No. 40	16.34	26.02
3/4″ x 1″	No. 28	10.89	No. 40	16.34	27.23
3/4″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
3/4″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
3/4″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
3/4″ x 1-3/4″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
3/4″ x 2″	No. 28	16.34	No. 28—2-3/4	20.57	36.91
13/16″ x 7/8″	No. 28	9.68	No. 40	16.34	26.02
13/16″ x 15/16″	No. 28	9.68	No. 40	16.34	26.02
13/16″ x 1″	No. 28	10.89	No. 40	16.34	27.23
13/16″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
13/16″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
13/16″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
13/16″ x 1-3/4″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
13/16″ x 2″	No. 28	16.34	No. 28—2-3/4	20.57	36.91
7/8″ x 15/16″	No. 28	9.68	No. 40	16.34	26.02
7/8″ x 1″	No. 28	10.89	No. 40	16.34	27.23
7/8″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
7/8″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
7/8″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
7/8″ x 1-3/4″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
7/8″ x 2″	No. 28	16.34	No. 28—3-3/4	24.81	41.15
15/16″ x 1″	No. 28	10.89	No. 40	16.34	27.23
15/16″ x 1-1/32″	No. 28	10.89	No. 40	16.34	27.23
15/16″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
15/16″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
15/16″ x 1-3/4 ″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
15/16″ x 2″	No. 28	16.34	No. 28—3-3/4	24.81	41.15
1″ x 1-1/8″	No. 28	10.89	No. 28—2-3/4	20.57	31.46
1″ x 1-3/16″	No. 28	10.89	No. 28—2-3/4	20.57	31.46
1″ x 1-1/4″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
1″ x 1-3/8″	No. 28	12.71	No. 28—2-3/4	20.57	33.28
1″ x 1-1/2″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
1″ x 1-5/8″	No. 28	13.31	No. 28—2-3/4	20.57	33.88
1″ x 1-3/4″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
1″ x 1-7/8″	No. 28	14.52	No. 28—2-3/4	20.57	35.09
1″ x 2″	No. 28	16.34	No. 28—3-3/4	24.81	41.15
1-1/32″ x 2-1/32″	No. 28	16.34	No. 28—3-3/4	24.81	41.15
1-1/8″ x 2-1/8″	No. 28	16.34	No. 28—3-3/4	24.81	41.15

type n

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1/16″ x 1/2″	No. 28	$12.10	No. 20	$14.52	$26.62
1/16″ x 3/4″	No. 28	12.10	No. 40	16.94	29.04
1/16″ x 1″	No. 28	14.52	No. 40	16.94	31.46
1/16″ x 1-1/32″	No. 28	14.52	No. 40	16.94	31.46
1/16″ x 2″	No. 28	19.36	No. 28—2-3/4	24.20	43.56
1/16″ x 2-1/32″	No. 28	19.36	No. 28—2-3/4	24.20	43.56
3/32″ x 1/4″	No. 8	11.50	No. 20	14.52	26.02
3/32″ x 3/8″	No. 8	11.50	No. 20	14.52	26.02
3/32″ x 1/2″	No. 28	12.10	No. 20	14.52	26.62
3/32″ x 5/8″	No. 28	12.10	No. 20	14.52	26.62
3/32″ x 3/4″	No. 28	12.10	No. 40	16.94	29.04

type n

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
3/32 x 7/8″	No. 28	$12.10	No. 40	$16.94	$29.04
3/32″ x 1″	No. 28	14.52	No. 40	16.94	31.46
3/32″ x 1-1/32″	No. 28	14.52	No. 40	16.94	31.46
1/8″ x 3/16″	No. 8	7.26	No. 20	10.29	17.55
1/8″ x 1/4″	No. 8	7.26	No. 20	10.29	17.55
1/8 x 5/16″	No. 8	7.26	No. 20	10.29	17.55
1/8″ x 3/8″	No. 8	7.26	No. 20	10.29	17.55
1/8″ x 7/16″	No. 28	8.47	No. 20	10.29	18.76
1/8″ x 1/2″	No. 28	8.47	No. 20	10.29	18.76
1/8″ x 9/16″	No. 28	8.47	No. 40	13.92	22.39
1/8″ x 5/8″	No. 28	8.47	No. 40	13.92	22.39
1/8″ x 11/16″	No. 28	8.47	No. 40	13.92	22.39
1/8″ x 3/4″	No. 28	8.47	No. 40	13.92	22.39
1/8″ x 13/16″	No. 28	8.47	No. 40	13.92	22.39
1/8″ x 7/8″	No. 28	8.47	No. 40	13.92	22.39
1/8″ x 15/16″	No. 28	8.47	No. 40	13.92	22.39
1/8″ x 1″	No. 28	9.68	No. 40	13.92	23.60
1/8″ x 1-1/32″	No. 28	9.68	No. 40	13.92	23.60
1/8 x 1-1/4″	No. 28	15.13	No. 28—2-3/4	18.15	33.28
1/8″ x 1-1/2″	No. 28	15.13	No. 28—2-3/4	18.15	33.28
1/8″ x 1-3/4″	No. 28	15.13	No. 28—2-3/4	18.15	33.28
1/8″ x 2″	No. 28	15.13	No. 28—2-3/4	18.15	33.28
5/32″ x 1/4″	No. 8	7.26	No. 20	10.29	17.55
5/32″ x 3/8″	No. 8	7.26	No. 20	10.29	17.55
5/32″ x 1/2″	No. 28	8.47	No. 20	10.29	18.76
5/32″ x 5/8″	No. 28	8.47	No. 20	10.29	18.76
5/32″ x 3/4″	No. 28	8.47	No. 40	13.92	22.39
5/32″ x 7/8″	No. 28	8.47	No. 40	13.92	22.39
5/32 x 1″	No. 28	9.68	No. 40	13.92	23.60
5/32″ x 1-1/32″	No. 28	9.68	No. 40	13.92	23.60
3/16″ x 1/4″	No. 8	7.26	No. 20	10.29	17.55
3/16″ x 5/16″	No. 8	7.26	No. 20	10.29	17.55
3/16″ x 3/8″	No. 8	7.26	No. 20	10.29	17.55
3/16″ x 7/16″	No. 28	8.47	No. 20	10.29	18.76
3/16″ x 1/2″	No. 28	8.47	No. 20	10.29	18.76
3/16″ x 9/16″	No. 28	8.47	No. 40	13.92	22.39
3/16″ x 5/8″	No. 28	8.47	No. 40	13.92	22.39
3/16″ x 11/16″	No. 28	8.47	No. 40	13.92	22.39
3/16″ x 3/4″	No. 28	8.47	No. 40	13.92	22.39
3/16″ x 13/16″	No. 28	8.47	No. 40	13.92	22.39
3/16″ x 7/8″	No. 28	8.47	No. 40	13.92	22.39
3/16″ x 15/16″	No. 28	8.47	No. 40	13.92	22.39
3/16″ x 1″	No. 28	9.68	No. 40	13.92	23.60
3/16″ x 1-1/32″	No. 28	9.68	No. 40	13.92	23.60
3/16″ x 1-1/4″	No. 28	11.50	No. 28—2-3/4	18.15	29.65
3/16″ x 1-1/2″	No. 28	12.10	No. 28—2-3/4	18.15	30.25
3/16″ x 1-3/4″	No. 28	13.31	No. 28—2-3/4	18.15	31.46
3/16″ x 2″	No. 28	15.13	No. 28—2-3/4	18.15	33.28
7/32″ x 1/4″	No. 8	7.26	No. 20	10.29	17.55
7/32″ x 3/8″	No. 8	7.26	No. 20	10.29	17.55
7/32″ x 1/2″	No. 28	8.47	No. 20	10.29	18.76
7/32″ x 5/8″	No. 28	8.47	No. 20	10.29	18.76
7/32″ x 3/4″	No. 28	8.47	No. 40	13.92	22.39
7/32″ x 7/8″	No. 28	8.47	No. 40	13.92	22.39
7/32″ x 1″	No. 28	9.68	No. 40	13.92	23.60
7/32″ x 1-1/32″	No. 28	9.68	No. 40	13.92	23.60
1/4″ x 5/16″	No. 8	7.26	No. 20	10.29	17.55
1/4″ x 3/8″	No. 8	7.26	No. 20	10.29	17.55

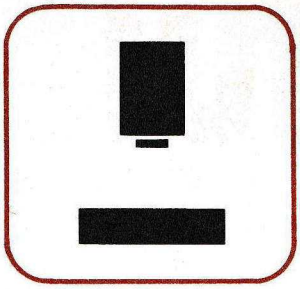
type n

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1/4" x 7/16"	No. 28	$8.47	No. 20	$10.29	$18.76
1/4" x 1/2"	No. 28	8.47	No. 20	10.29	18.76
1/4" x 9/16"	No. 28	8.47	No. 40	13.92	22.39
1/4" x 5/8"	No. 28	8.47	No. 40	13.92	22.39
1/4" x 11/16"	No. 28	8.47	No. 40	13.92	22.39
1/4" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
1/4" x 13/16"	No. 28	8.47	No. 40	13.92	22.39
1/4" x 7/8"	No. 28	8.47	No. 40	13.92	22.39
1/4" x 15/16"	No. 28	8.47	No. 40	13.92	22.39
1/4" x 1"	No. 28	9.68	No. 40	13.92	23.60
1/4" x 1-1/32"	No. 28	9.68	No. 40	13.92	23.60
1/4" x 1-1/4"	No. 28	11.50	No. 28—2-3/4	18.15	29.65
1/4" x 1-1/2"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
1/4" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
1/4" x 2"	No. 28	15.13	No. 28—2-3/4	18.15	33.28
9/32" x 3/8"	No. 8	7.26	No. 20	10.29	17.55
9/32" x 1/2"	No. 28	8.47	No. 20	10.29	18.76
9/32" x 5/8"	No. 28	8.47	No. 40	13.92	22.39
9/32" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
9/32" x 7/8"	No. 28	8.47	No. 40	13.92	22.39
9/32" x 1"	No. 28	9.68	No. 40	13.92	23.60
9/32" x 1-1/32"	No. 28	9.68	No. 40	13.92	23.60
5/16" x 3/8"	No. 28	8.47	No. 20	10.29	18.76
5/16" x 7/16"	No. 28	8.47	No. 20	10.29	18.76
5/16" x 1/2"	No. 28	8.47	No. 20	10.29	18.76
5/16" x 9/16"	No. 28	8.47	No. 40	13.92	22.39
5/16" x 5/8"	No. 28	8.47	No. 40	13.92	22.39
5/16" x 11/16"	No. 28	8.47	No. 40	13.92	22.39
5/16" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
5/16" x 13/16"	No. 28	8.47	No. 40	13.92	22.39
5/16" x 7/8"	No. 28	8.47	No. 40	13.92	22.39
5/16" x 15/16"	No. 28	8.47	No. 40	13.92	22.39
5/16" x 1"	No. 28	9.68	No. 40	13.92	23.60
5/16" x 1-1/32"	No. 28	9.68	No. 40	13.92	23.60
5/16" x 1-1/4"	No. 28	11.50	No. 28—2-3/4	18.15	29.65
5/16" x 1-1/2"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
5/16" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
5/16" x 2"	No. 28	15.13	No. 28—2-3/4	18.15	33.28
11/32" x 3/8"	No. 28	8.47	No. 20	10.29	18.76
11/32" x 1/2"	No. 28	8.47	No. 20	10.29	18.76
11/32" x 5/8"	No. 28	8.47	No. 40	13.92	22.39
11/32" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
11/32" x 7/8"	No. 28	8.47	No. 40	13.92	22.39
11/32" x 1"	No. 28	9.68	No. 40	13.92	23.60
11/32" x 1-1/32"	No. 28	9.68	No. 40	13.92	23.60
3/8" x 7/16"	No. 28	8.47	No. 20	10.29	18.76
3/8" x 1/2"	No. 28	8.47	No. 20	10.29	18.76
3/8" x 9/16"	No. 28	8.47	No. 40	13.92	22.39
3/8" x 5/8"	No. 28	8.47	No. 40	13.92	22.39
3/8" x 11/16"	No. 28	8.47	No. 40	13.92	22.39
3/8" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
3/8" x 13/16"	No. 28	8.47	No. 40	13.92	22.39
3/8" x 7/8"	No. 28	8.47	No. 40	13.92	22.39
3/8" x 15/16"	No. 28	8.47	No. 40	13.92	22.39
3/8" x 1"	No. 28	9.68	No. 40	13.92	23.60
3/8" x 1-1/32"	No. 28	9.68	No. 40	13.92	23.60
3/8" x 1-1/4"	No. 28	11.50	No. 28—2-3/4	18.15	29.65
3/8" x 1-1/2"	No. 28	12.10	No. 28—2-3/4	18.15	30.25

type n

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
3/8" x 1-3/4"	No. 28	$13.31	No. 28—2-3/4	$18.15	$31.46
3/8" x 2"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
13/32" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
13/32" x 13/16"	No. 28	8.47	No. 40	13.92	22.39
13/32" x 7/8"	No. 28	8.47	No. 40	13.92	22.39
13/32" x 1"	No. 28	9.68	No. 40	13.92	23.60
13/32" x 1-1/32"	No. 28	9.68	No. 40	13.92	23.60
7/16" x 1/2"	No. 28	8.47	No. 20	10.29	18.76
7/16" x 9/16"	No. 28	8.47	No. 40	13.92	22.39
7/16" x 5/8"	No. 28	8.47	No. 40	13.92	22.39
7/16" x 11/16"	No. 28	8.47	No. 40	13.92	22.39
7/16" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
7/16" x 13/16"	No. 28	8.47	No. 40	13.92	22.39
7/16" x 7/8"	No. 28	8.47	No. 40	13.92	22.39
7/16" x 15/16"	No. 28	9.68	No. 40	13.92	23.60
7/16" x 1"	No. 28	9.68	No. 40	13.92	23.60
7/16" x 1-1/32"	No. 28	9.68	No. 40	13.92	23.60
7/16" x 1-1/4"	No. 28	11.50	No. 28—2-3/4	18.15	29.65
7/16" x 1-1/2"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
7/16" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
7/16" x 2"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
1/2" x 9/16"	No. 28	8.47	No. 40	13.92	22.39
1/2" x 5/8"	No. 28	8.47	No. 40	13.92	22.39
1/2" x 11/16"	No. 28	8.47	No. 40	13.92	22.39
1/2" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
1/2" x 13/16"	No. 28	8.47	No. 40	13.92	22.39
1/2" x 7/8"	No. 28	9.68	No. 40	13.92	23.60
1/2" x 15/16"	No. 28	9.68	No. 40	13.92	23.60
1/2" x 1"	No. 28	9.68	No. 40	13.92	23.60
1/2" x 1-1/32	No. 28	9.68	No. 40	13.92	23.60
1/2" x 1-1/4"	No. 28	11.50	No. 28—2-3/4	18.15	29.65
1/2" x 1-1/2"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
1/2" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
1/2" x 2"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
17/32" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
17/32" x 7/8"	No. 28	9.68	No. 40	13.92	23.60
17/32" x 1"	No. 28	9.68	No. 40	13.92	23.60
17/32" x 1-1/32"	No. 28	9.68	No. 40	13.92	23.60
17/32" x 1-9/32"	No. 28	11.50	No. 28—2-3/4	18.15	29.65
17/32" x 1-11/32"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
17/32" x 1-13/32"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
17/32" x 1-15/32"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
17/32" x 1-17/32"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
9/16" x 5/8"	No. 28	8.47	No. 40	13.92	22.39
9/16" x 11/16"	No. 28	8.47	No. 40	13.92	22.39
9/16" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
9/16" x 13/16"	No. 28	8.47	No. 40	13.92	22.39
9/16" x 7/8"	No. 28	9.68	No. 40	13.92	23.60
9/16" x 15/16"	No. 28	9.68	No. 40	13.92	23.60
9/16" x 1"	No. 28	9.68	No. 40	13.92	23.60
9/16" x 1-1/32"	No. 28	9.68	No. 40	13.92	23.60
9/16" x 1-1/4"	No. 28	11.50	No. 28—2-3/4	18.15	29.65
9/16" x 1-1/2"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
9/16" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
9/16" x 2"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
5/8" x 11/16"	No. 28	8.47	No. 40	13.92	22.39
5/8" x 3/4"	No. 28	8.47	No. 40	13.92	22.39
5/8" x 13/16"	No. 28	9.68	No. 40	13.92	23.60

punches and dies



type n

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
5/8" x 7/8"	No. 28	$9.68	No. 40	$13.92	$23.60
5/8" x 15/16"	No. 28	9.68	No. 40	13.92	23.60
5/8" x 1"	No. 28	9.68	No. 40	13.92	23.60
5/8" x 1-1/32"	No. 28	11.50	No. 40	13.92	25.42
5/8" x 1-1/4"	No. 28	11.50	No. 28—2-3/4	18.15	29.65
5/8" x 1-1/2"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
5/8" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
5/8" x 2"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
11/16" x 3/4"	No. 28	9.68	No. 40	13.92	23.60
11/16" x 13/16"	No. 28	9.68	No. 40	13.92	23.60
11/16" x 7/8"	No. 28	9.68	No. 40	13.92	23.60
11/16" x 15/16"	No. 28	9.68	No. 40	13.92	23.60
11/16" x 1"	No. 28	9.68	No. 40	13.92	23.60
11/16" x 1-1/32"	No. 28	11.50	No. 40	13.92	25.42
11/16" x 1-1/4"	No. 28	11.50	No. 28—2-3/4	18.15	29.65
11/16" x 1-1/2"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
11/16" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
11/16" x 2"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
3/4" x 13/16"	No. 28	9.68	No. 40	13.92	23.60
3/4" x 7/8"	No. 28	9.68	No. 40	13.92	23.60
3/4" x 15/16"	No. 28	9.68	No. 40	13.92	23.60
3/4" x 1"	No. 28	11.50	No. 40	13.92	25.42
3/4" x 1-1/32"	No. 28	11.50	No. 40	13.92	25.42
3/4" x 1-1/4"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
3/4" x 1-1/2"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
3/4" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
3/4" x 2"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
13/16" x 7/8"	No. 28	9.68	No. 40	13.92	23.60
13/16" x 15/16"	No. 28	11.50	No. 40	13.92	25.42
13/16" x 1"	No. 28	11.50	No. 40	13.92	25.42
13/16" x 1-1/32"	No. 28	11.50	No. 40	13.92	25.42
13/16" x 1-1/4"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
13/16" x 1-1/2"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
13/16" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
13/16" x 2"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
7/8" x 15/16"	No. 28	11.50	No. 40	13.92	25.42
7/8" x 1"	No. 28	11.50	No. 40	13.92	25.42
7/8" x 1-1/32"	No. 28	11.50	No. 40	13.92	25.42
7/8" x 1-1/4"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
7/8" x 1-1/2"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
7/8" x 1-3/4"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
7/8" x 2"	No. 28	15.13	No. 28—3-3/4	22,39	37.52
15/16" x 1"	No. 28	12.10	No. 40	13.92	26.02
15/16" x 1-1/32"	No. 28	12.10	No. 40	13.92	26.02
15/16" x 1-1/4"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
15/16" x 1-1/2"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
15/16" x 1-3/4"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
15/16" x 2"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
1" x 1-1/8"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
1" x 1-3/16"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
1" x 1-1/4"	No. 28	12.10	No. 28—2-3/4	18.15	30.25
1" x 1-3/8"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
1" x 1-1/2"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
1" x 1-5/8"	No. 28	13.31	No. 28—2-3/4	18.15	31.46
1" x 1-3/4"	No. 28	15.13	No. 28—3-3/4	22.39	37.52
1" x 1-7/8"	No. 28	15.31	No. 28—3-3/4	22.39	37.52
1" x 2"	No. 28	16.50	No. 28—3-3/4	22.39	38.89
1-1/32" x 2-1/32"	No. 28	16.50	No. 28—3-3/4	22.39	38.89
1-1/8" x 2-1/8"	No. 28	16.50	No. 28—3-3/4	22.39	38.89

type r

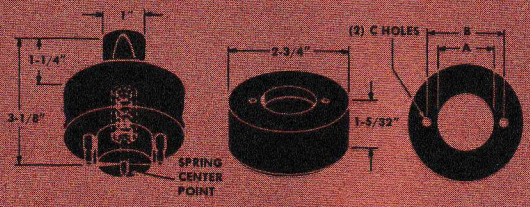
Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1/8" x 1/8"	No. 8	$5.50	No. 20	$9.35	$14.85
5/32" x 5/32"	No. 8	5.50	No. 20	9.35	14.85
3/16" x 3/16"	No. 8	5.50	No. 20	9.35	14.85
7/32" x 7/32"	No. 8	5.50	No. 20	9.35	14.85
1/4" x 1/4"	No. 8	5.50	No. 20	9.35	14.85
9/32" x 9/32"	No. 8	5.50	No. 20	9.35	14.85
5/16" x 5/16"	No. 8	5.50	No. 20	9.35	14.85
11/32" x 11/32"	No. 28	10.45	No. 20	9.35	19.80
3/8" x 3/8"	No. 28	10.45	No. 20	9.35	19.80
13/32" x 13/32"	No. 28	10.45	No. 20	9.35	19.80
7/16" x 7/16"	No. 28	10.45	No. 20	9.35	19.80
15/32" x 15/32"	No. 28	10.45	No. 20	9.35	19.80
1/2" x 1/2"	No. 28	10.45	No. 20	9.35	19.80
17/32" x 17/32"	No. 28	10.45	No. 40	13.20	23.65
9/16" x 9/16"	No. 28	10.45	No. 40	13.20	23.65
19/32" x 19/32"	No. 28	10.45	No. 40	13.20	23.65
5/8" x 5/8"	No. 28	10.45	No. 40	13.20	23.65
21/32" x 21/32"	No. 28	10.45	No. 40	13.20	23.65
11/16" x 11/16"	No. 28	10.45	No. 40	13.20	23.65
23/32" x 23/32"	No. 28	11.00	No. 40	13.20	24.20
3/4" x 3/4"	No. 28	11.00	No. 40	13.20	24.20
25/32" x 25/32"	No. 28	11.00	No. 40	13.20	24.20
13/16" x 13/16"	No. 28	12.10	No. 40	14.52	26.62
27/32" x 27/32"	No. 28	12.10	No. 40	14.52	26.62
7/8" x 7/8"	No. 28	12.10	No. 40	14.52	26.62
29/32" x 29/32"	No. 28	12.10	No. 40	14.52	26.62
15/16" x 15/16"	No. 28	12.10	No. 40	14.52	26.62
31/32" x 31/32"	No. 28	12.10	No. 40	14.52	26.62
1" x 1"	No. 28	12.10	No. 40	14.52	26.62
1-1/16" x 1-1/16"	No. 28	12.10	No. 40	14.52	26.62
1-1/8" x 1-1/8"	No. 28	12.93	No. 28—2-3/4	17.05	29.98
1-3/16" x 1-3/16"	No. 28	12.93	No. 28—2-3/4	17.05	29.98
1-1/4" x 1-1/4"	No. 28	12.93	No. 28—2-3/4	17.05	29.98
1-5/16" x 1-5/16"	No. 28	12.93	No. 28—2-3/4	17.05	29.98
1-3/8" x 1-3/8"	No. 28	15.95	No. 28—2-3/4	18.15	34.10
1-7/16" x 1-7/16"	No. 28	15.95	No. 28—3-3/4	22.55	38.50
1-1/2" x 1-1/2"	No. 28	15.95	No. 28—3-3/4	22.55	38.50
1-9/16" x 1-9/16"	No. 28	15.95	No. 28—3-3/4	22.55	38.50
1-5/8" x 1-5/8"	No. 28	15.95	No. 28—3-3/4	22.55	38.50
1-11/16" x 1-11/16"	No. 28	15.95	No. 28—3-3/4	22.55	38.50
1-3/4" x 1-3/4"	No. 28	15.95	No. 28—3-3/4	22.55	38.50
1-13/16" x 1-13/16"	No. 28	19.80	No. 28—3-3/4	22.55	42.35
1-7/8" x 1-7/8"	No. 28	19.80	No. 28—3-3/4	22.55	42.35
1-15/16" x 1-15/16"	No. 28	19.80	No. 28—3-3/4	22.55	42.35
2" x 2"	No. 28	19.80	No. 28—3-3/4	22.55	42.35
	No. 28	29.15	No. 28—4-3/4	44.00	73.15
2-1/2" x 2-1/2"	No. 28—1-9/16	37.95	No. 28—4-3/4	44.00	81.95
	No. 28—2	55.00	No. 28—4-3/4	44.00	99.00
	No. 28	36.58	Die and	71.50	108.08
3" x 3"	No. 28—1-9/16	56.38	die shoe	71.50	127.88
	No. 28—2	62.70	one unit.	71.50	134.20
	No. 28	58.58	State press	126.50	185.08
4" x 4"	No. 28—1-9/16	78.38	to be used	126.50	204.88
	No. 28—2	84.98	with.	126.50	211.48

STANDARD DOUBLE ANGLE NOTCHING PUNCH and DIE

60°-90°	No. 28	$15.40	No. 28—2-3/4	$20.90	$36.30

receptacle punches and dies-style A

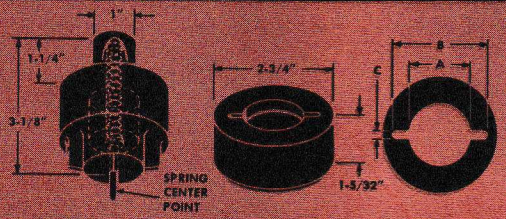
Sold in sets only.



Size A	Size B	Size C	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1-1/8"	1-1/2"	3/16"	No. 28	$48.40	No. 28—2-3/4	$30.25	$78.65
1-1/4"	1-5/8"	3/16"	No. 28	48.40	No. 28—2-3/4	30.25	78.65
1-3/8"	1-13/16"	3/16"	No. 28	48.40	No. 28—2-3/4	30.25	78.65

receptacle punches and dies-style B

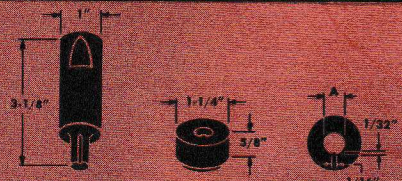
Sold in sets only.



1-1/8"	1-11/16"	3/16"	No. 28	55.00	No. 28—2-3/4	33.00	88.00
1-1/4"	1-13/16"	3/16"	No. 28	55.00	No. 28—2-3/4	33.00	88.00
1-3/8"	2-1/8	3/16""	No. 28	55.00	No. 28—2-3/4	33.00	88.00

toggle switch punches and dies

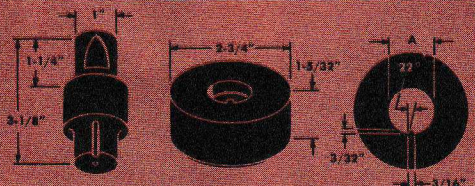
Sold in sets only.



15/32"	—	—	No. 28	15.40	No. 20	23.10	38.50
1/2"	—	—	No. 28	15.40	No. 20	23.10	38.50

keyed receptacle punches and dies

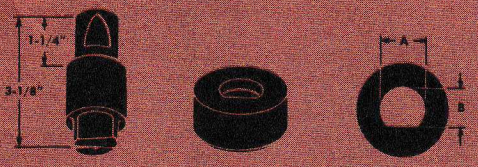
Sold in sets only.



1.172	—	—	No. 28	22.55	No. 28—2-3/4	33.55	56.10
1.327	—	—	No. 28	22.55	No. 28—2-3/4	33.55	56.10

receptacle punches and dies-style D

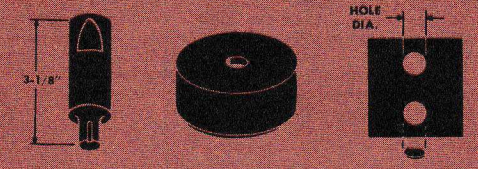
Sold in sets only.



.375	.350	—	No. 8	9.90	No. 20	12.10	22.00
.406	.359	—	No. 8	9.90	No. 20	12.10	22.00
.501	.469	—	No. 28	11.00	No. 40	13.20	24.20
.562	.541	—	No. 28	11.00	No. 40	13.20	24.20
.626	.596	—	No. 28	11.00	No. 40	13.20	24.20
1.004	.963	—	No. 28	12.10	No. 40	14.58	26.68
1.031	.825	—	No. 28	12.10	No. 40	14.58	26.68
1.032	.875	—	No. 28	12.10	No. 40	14.58	26.68

electrical outlet knockout punches and dies

Sold in sets only.



Pipe Size	Hole Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1/8"	7/16"	No. 8	$6.05	No. 20	$8.80	$14.85
3/8"	11/16"	No. 28	7.15	No. 20	10.45	17.60
1/2"	7/8"	No. 28	8.80	No. 28—2-3/4	13.20	22.00
3/4"	1-1/8"	No. 28	9.90	No. 28—2-3/4	14.85	24.75
1"	1-3/8"	No. 28	11.55	No. 28—2-3/4	17.60	29.15
1-1/4"	1-11/16"	No. 28	12.65	No. 28—2-3/4	19.25	31.90

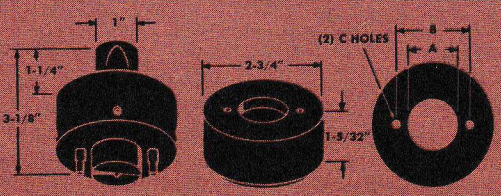
double electrical outlet knockout punches and dies

Sold in sets only.

1/2" & 3/4"	7/8" & 1-1/8"	No. 28	22.55	No. 28—2-3/4	33.55	56.10
1" & 1-1/4"	1-3/8" & 1-11/16"	No. 28	22.55	No. 28—2-3/4	33.55	56.10

multi socket punches and dies

Sold in sets only.

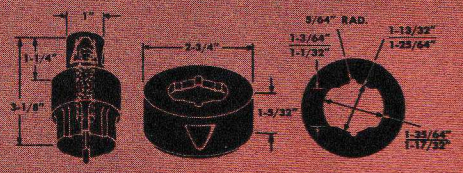


Size A	Size B	Size C	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
5/8"	7/8"	1/8"	No. 28	$41.25	No. 28—2-3/4	$30.25	$71.50
3/4"	1-1/8"	1/8"	No. 28	41.25	No. 28—2-3/4	30.25	71.50
1-1/32"	1-5/8"	5/32"	No. 28	41.25	No. 28—2-3/4	30.25	71.50
1-1/8"	1-1/2"	5/32"	No. 28	41.25	No. 28—2-3/4	30.25	71.50
1-5/32"	1-5/8"	5/32"	No. 28	41.25	No. 28—2-3/4	30.25	71.50
1-5/16"	1-11/16"	5/32"	No. 28	41.25	No. 28—2-3/4	30.25	71.50

Electrical punches and dies shown, but not stocked, are for 12 gauge mild steel. For 11 gauge to 1/4", add 20%; 1/4" or thicker add 30% to price.

electrical punches and dies

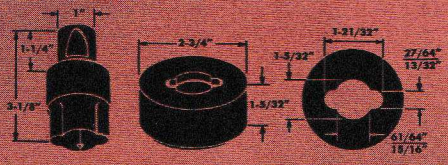
receptacle punch and die for union insulating sockets



Sold in sets only.

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
SEE DRAWINGS	No. 28	$44.00	No. 28—2-3/4	$55.00	$99.00

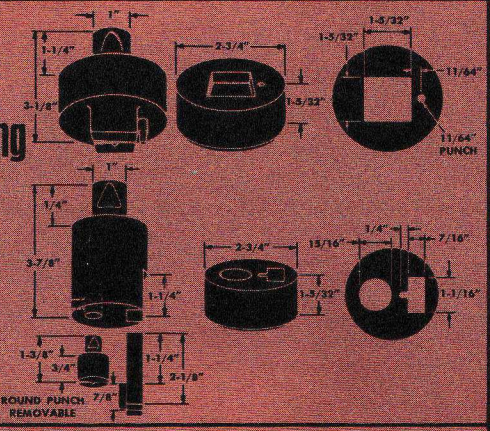
bryant fluorescent lamp holder



Sold in sets only.

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
SEE DRAWINGS	No. 28	44.00	No. 28—2-3/4	49.50	93.50

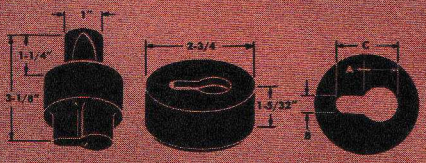
fluorescent lighting fixture starter punches and dies



Sold in sets only.

Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
SLIMLINE	No. 28	44.00	No. 28—2-3/4	27.50	71.50
40 WATT	No. 28	61.60	No. 28—2-3/4	41.25	102.85

keyhole punches and dies

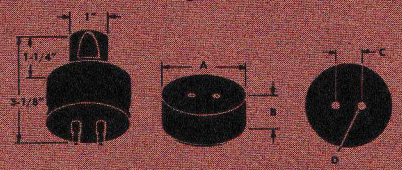


Sold in sets only.

Size A	Size B	Size C	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
1/4″	1/8″	7/16″	No. 28	$27.50	No. 28—2-3/4	$27.50	$55.00
3/8″	3/16″	5/8″	No. 28	27.50	No. 28—2-3/4	27.50	55.00
1/2″	1/4″	7/8″	No. 28	27.50	No. 28—2-3/4	33.00	60.50
5/8″	5/16″	1″	No. 28	27.50	No. 28—2-3/4	33.00	60.50
3/4″	3/8″	1-1/4″	No. 28	27.50	No. 28—2-3/4	33.00	60.50
7/8″	7/16″	1-1/2″	No. 28	35.20	No. 28—2-3/4	41.80	77.00
1″	1/2″	1-5/8″	No. 28	35.20	No. 28—2-3/4	41.80	77.00

starter sockets punches and dies

No. 28 Style Punch

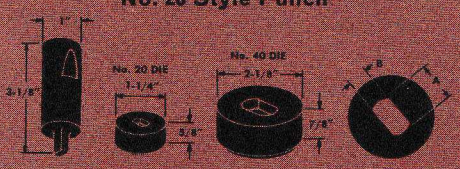


Sold in sets only.

Series	A	B	C	D	Price Per Set
596, 597-C, 597-SC, 598	2-3/4″	1-5/32″	1-7/16″	5/32″ Dia.	$60.50
4338-4338W	2-1/8″	7/8″	31/32″	5/32″ Dia.	53.35
4970-4975, 4978, 4979, 4981	3-3/4″	1-5/32″	2-25/32″	9/64″ Dia.	75.62
ALF272, ALF472	2-1/8″	7/8″	5/8″	5/32″ Dia.	53.35
SLF772 (End mount)	2-1/8″	7/8″	5/8″	5/32″ Dia.	53.35

style P punches and dies

No. 28 Style Punch



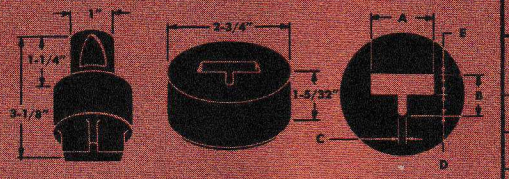
Sold in sets only.

A	B	Die Size	Price Per Set	A	B	Die Size	Price Per Set
3/8″	11/32″	No. 20	$27.50	11/16″	9/16″	No. 20	$27.50
7/16″	13/32″	No. 20	27.50	11/16″	5/8″	No. 20	27.50
1/2″	15/32″	No. 20	27.50	3/4″	43/64″	No. 20	27.50
33/64″	15/32″	No. 20	27.50	7/8″	13/16″	No. 40	33.00
9/16″	17/32″	No. 20	27.50	7/8″	27/32″	No. 40	33.00
5/8″	9/16″	No. 20	27.50	1-3/32″	1-1/32″	No. 40	33.00
21/32″	9/16″	No. 20	27.50				

Electrical punches and dies shown, but not stocked, are for 12 gauge mild steel. For 11 gauge to 1/4", add 20%; 1/4" or thicker add 30% to price.

electrical punches and dies

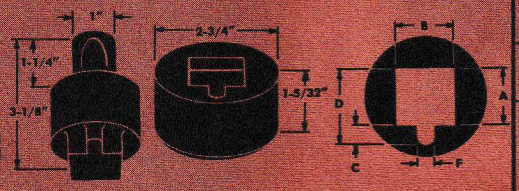
fluorescent lampholders punches and dies



Sold in sets only.

Series	A	B	C	D	E	F	Price Per Set
594, 594W, 594BR, 594WBR	1-3/8"	7/8"	9/64"	7/16"	7/16"	—	$91.30
4301, 4302	1-1/64"	11/16"	5/32"	1/4"	7/16"	—	91.30
751, 757	1-1/16"	3/4"	5/16"	9/32"	15/32"	—	91.30
751, 753, 757	1-1/32"	9/16"	5/32"	5/32"	13/32"	—	91.30

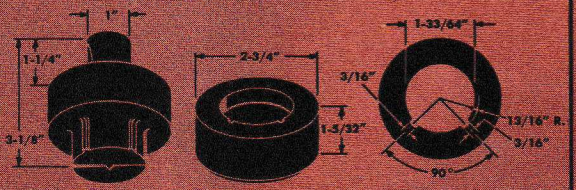
fluorescent lampholders punches and dies



Sold in sets only.

Socket Bar	1-5/32"	1-3/16"	9/32"	1-7/16"	—	3/16"	91.30
Cover Bar	1-1/4"	1-1/4"	7/16"	1-11/16"	—	3/8"	
755-756, 755L-756L 755LX-756LX, 900-901-917-918							

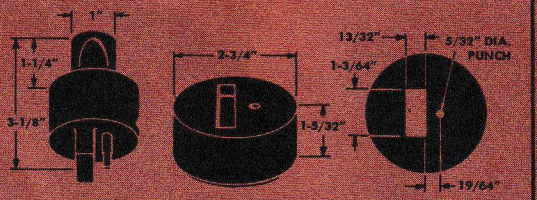
new bryant series punch and die



Sold in sets only.

620P-620S — SEE DRAWINGS — 91.30

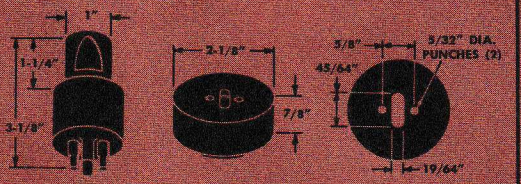
bryant series punch and die



Sold in sets only.

78 x 491
78 x 354
505 x 75 — SEE DRAWINGS — 91.30

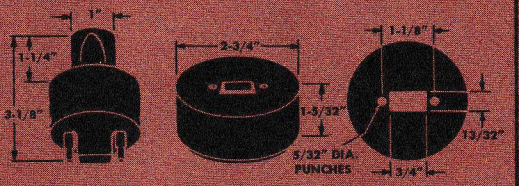
fluorescent lampholders punch and die



Sold in sets only.

AS SHOWN — SEE DRAWINGS — 99.00

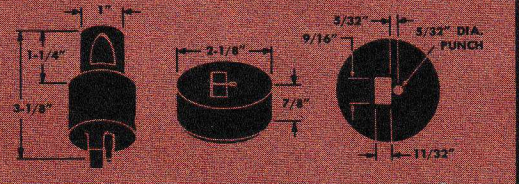
miniature power outlets with bracket



Sold in sets only.

221, 222
223, 224 — SEE DRAWINGS — 91.30

bryant series punch and die



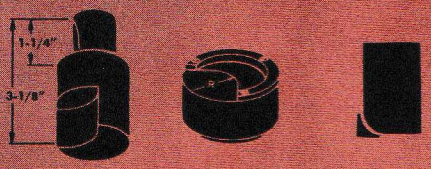
Sold in sets only.

4330-4330W — SEE DRAWINGS — 91.30

Electrical punches and dies shown, but not stocked, are for 12 gauge mild steel. For 11 gauge to 1/4", add 20%; 1/4" or thicker add 30% to price.

special application punches and dies

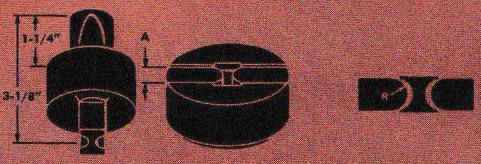
corner trimming punches and dies



Sold in sets only.

Size A	Size R	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
—	1/16"	No. 8	$29.70	No. 20	$36.30	$ 66.00
—	1/8"	No. 8	29.70	No. 20	36.30	66.00
—	3/16"	No. 8	29.70	No. 20	36.30	66.00
—	1/4"	No. 28	29.70	No. 40	36.30	66.00
—	3/8"	No. 28	29.70	No. 40	36.30	66.00
—	1/2"	No. 28	29.70	No. 40	36.30	66.00
—	5/8"	No. 28	47.30	No. 28—2-3/4	55.55	102.85
—	3/4"	No. 28	47.30	No. 28—2-3/4	55.55	102.85
—	7/8"	No. 28	47.30	No. 28—2-3/4	55.55	102.85
—	1"	No. 28	47.30	No. 28—2-3/4	55.55	102.85
—	1-1/4"	No. 28	54.45	No. 28—3-3/4	66.55	121.00
—	1-1/2"	No. 28	54.45	No. 28—3-3/4	66.55	121.00
—	2"	No. 28	64.35	No. 28—4-3/4	78.65	143.00

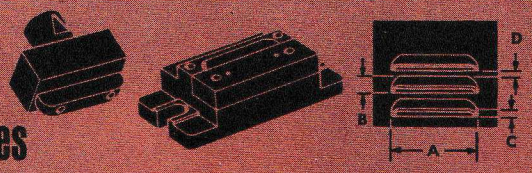
trimming and cutoff punches and dies



Sold in sets only. For over 1/8" material, request quotations.

1/4"	1/8"	No. 28	44.00	No. 40	49.50	93.50
3/8"	3/16"	No. 28	44.00	No. 40	49.50	93.50
1/2"	1/4"	No. 28	49.50	No. 40	55.00	104.50
5/8"	5/16"	No. 28	49.50	No. 40	55.00	104.50
3/4"	3/8"	No. 28	55.00	No. 28—2-3/4	60.50	115.50
7/8"	7/16"	No. 28	60.50	No. 28—3-3/4	71.50	132.00
1"	1/2"	No. 28	60.50	No. 28—3-3/4	71.50	132.00
1-1/4"	5/8"	No. 28	66.00	No. 28—3-3/4	77.00	143.00
1-1/2"	3/4"	No. 28	71.50	No. 28—3-3/4	82.50	154.00

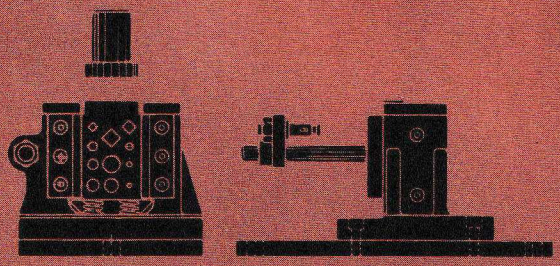
louvre punches and dies



Sold in sets only. Punches furnished with 1", 1-9/16" or 2" shank — specify size. 1" shank, 5-1/8" shut height; 1-9/16" shank, 5-5/8" shut height; 2" shank, 5-5/8" shut height.

Size A	Size B	Size C	Size D	Price Per Set
2"	1/2"	3/16"	1/4"	$137.50
3"	5/8"	1/4"	1/4"	154.00
4"	3/4"	1/4"	3/8"	176.00
5"	3/4"	5/16"	3/8"	198.00
6"	3/4"	5/16"	3/8"	242.00

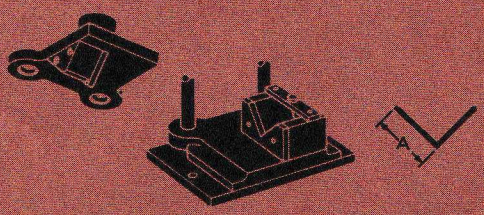
rod cut-off



Replacement dies sold in sets only.

Model Number	A-601	B-902	C-2403
Tonnage Required for Largest Rod Size	8 Tons 6" Shut Height	10 Tons 6" Shut Height	25 Tons 7-1/2" Shut Height
Punch Shank Size	1"	1-9/16"	2"
Round Sizes	5/32" 3/16" 1/4" 5/16" 3/8" 7/16" 1/2"	5/32" 3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 5/8"	5/8" 11/16" 3/4" 7/8" 1"
Square Sizes	1/4" 3/8"	1/4" 3/8" 1/2"	5/8" 3/4"
Price Per Set	$176.00	$176.00	$275.00
Replacement Movable Die	55.00	55.00	71.50
Replacement Stationary Die	55.00	55.00	71.50

angle iron cut-off punch and die



Replacement dies sold in sets only. 1-9/16" shank, 5-3/4" shut height; 2" shank, 7-1/8" shut height.

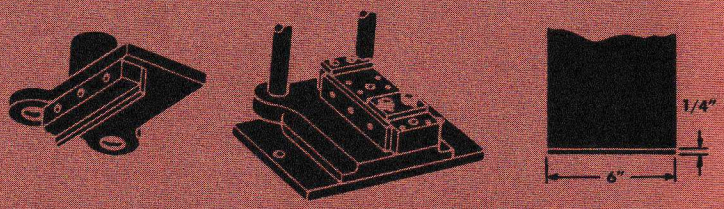
Size of Angle A	Pressure Required in Tons	Punch Shank Diameter
2" x 2" x 1/8"	13	1-9/16"
1-3/4" x 1-3/4" x 3/16"	16	1-9/16"
2" x 2" x 1/4"	25	1-9/16"
3" x 3" x 1/4"	38	2"

Size	Shank Size	Net Price
Price Per Set—Thru 2" x 2" x 1/4"	1-9/16"	$253.00
Price Per Set—Thru 3" x 3" x 1/4"	2"	330.00
Replacement Upper Blade	1-9/16"	22.00
Replacement Lower Die	1-9/16"	24.75
Replacement Upper Blade	2"	33.00
Replacement Lower Die	2"	35.75

special application punches and dies

flat stock cut-off punch and die

Punches furnished with 1-9/16" or 2" shank — specify size.



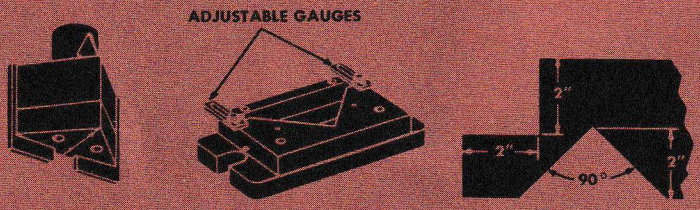
1-9/16" shank, 5-3/4" shut height; 2" shank, 6-5/8" shut height.

Size of Flat	Shearing Pressure Required Mild Steel
1/8" x 6"	9 Tons
3/16" x 6"	14 Tons
1/4" x 6"	18 Tons

Price Per Set	$253.00
Replacement Upper Blade	16.50
Replacement Lower Blade	16.50

combination notching punch and die

Punches furnished with 1", 1-9/16" or 2" shank — specify size.

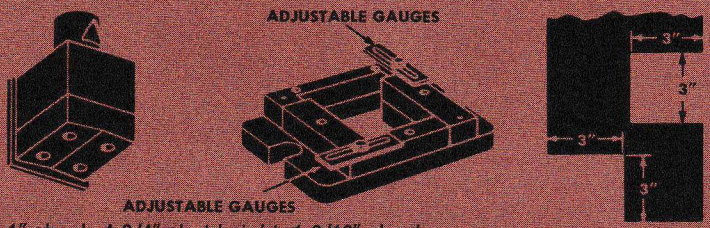


1" shank, 4-3/4" shut height; 1-9/16" shank, 5-1/2" shut height; 2" shank, 5-1/2" shut height.

Price Per Set	$176.00
Replacement Upper Blade	33.00
Replacement Lower Die	44.00
Replacement Heel	11.00

combination notching and coping punch and die

Punches furnished with 1", 1-9/16" or 2" shank — specify size.

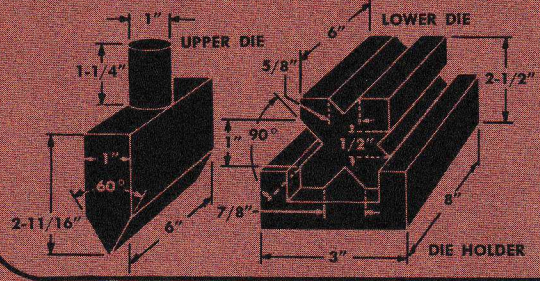


1" shank, 4-3/4" shut height; 1-9/16" shank, 5-1/2" shut height; 2" shank, 5-1/2" shut height.

Price Per Set	$176.00
Replacement Upper Blade	33.00
Replacement Lower Die	66.00
Replacement Heel	11.00

no. 2800 6" 90° vee die

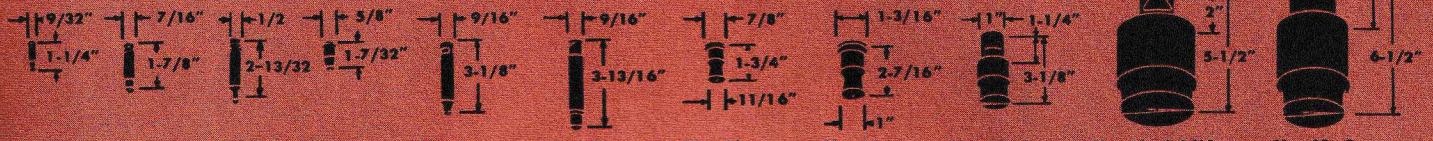
Punches furnished with 1" or 1-9/16" shank — specify size.



1" or 1-9/16" shank, 5" shut height.

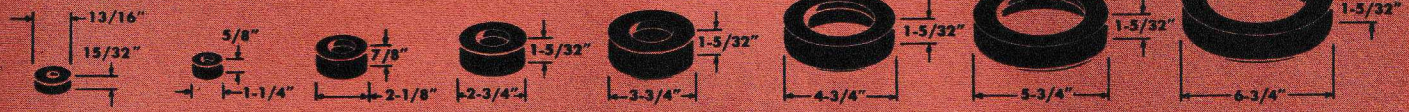
Style	Part	Price
No. 2800U	Upper Die	$24.20
No. 2800L	Lower Die	30.25
No. 2800DH	Die Holder	30.25

punch styles



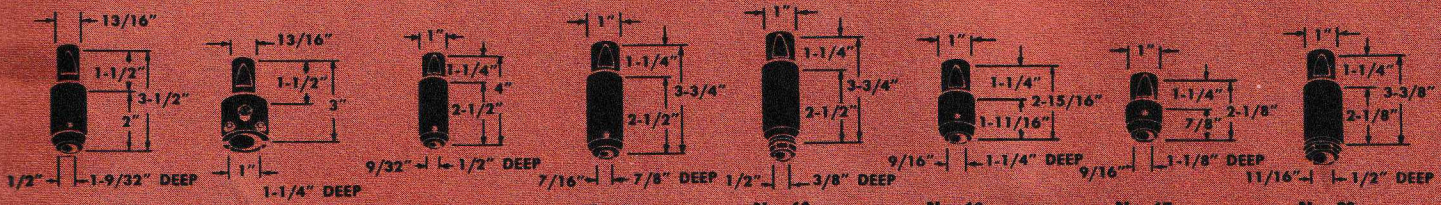
No. 5 | No. 7 | No. 8 | No. 10 | No. 16 | No. 17 | No. 20 | No. 40 | No. 28—1 | No. 28—1-9/16 | No. 28—2

die styles

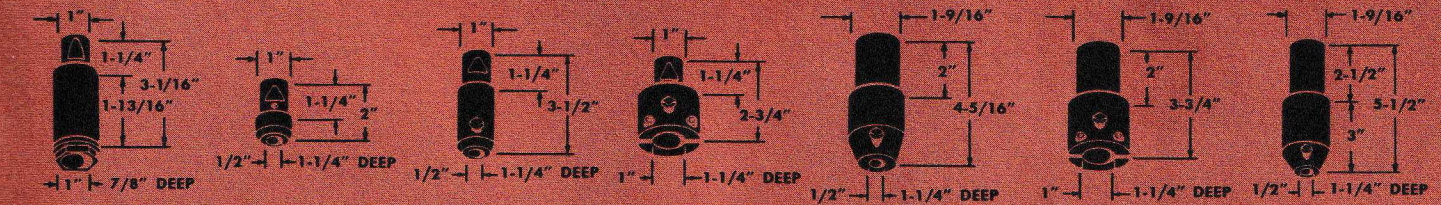


No. 10 | No. 20 | No. 40 | No. 28—2-3/4 | No. 28—3-3/4 | No. 28—4-3/4 | No. 28—5-3/4 | No. 28—6-3/4

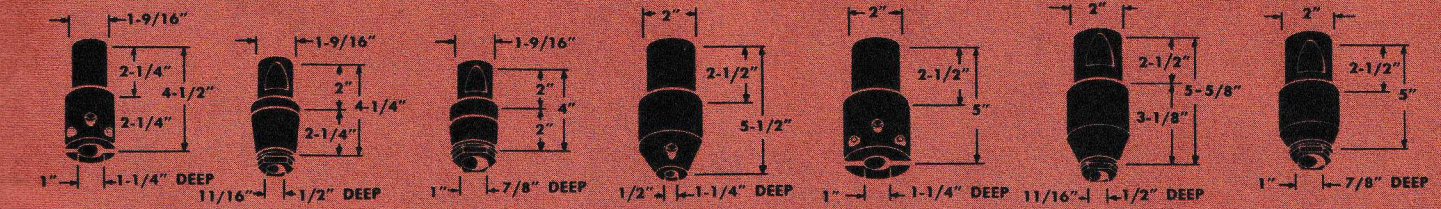
punch holder styles



No. F 8 13/16 $8.80 | **No. F 28 13/16** $8.80 | **No. 5** $8.25 | **No. 7** $8.25 | **No. 10** $9.35 | **No. 16** $8.25 | **No. 17** $8.25 | **No. 20** $9.90

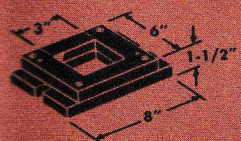


No. 40 $11.00 | **No. L 8** $8.25 | **No. F 8** $8.25 | **No. F 28** $12.10 | **No. P 8** $8.25 | **No. P 28** $12.10 | **No. P 8-431 1-9/16** $14.85

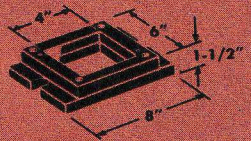


No. P 28-431 1-9/16 $18.15 | **No. 20 1-9/16** $11.00 | **No. 40 1-9/16** $12.10 | **No. P 8-331** $14.85 | **No. P 28-331** $20.35 | **No. 20 2** $19.80 | **No. 40 2** $27.50

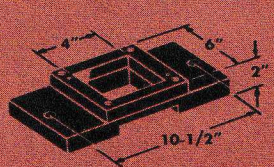
die and die shoe units



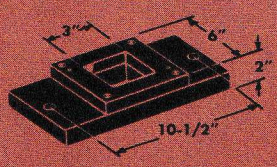
No. F-3" SQUARE DIE AND DIE SHOE UNIT



No. F-4" SQUARE DIE AND DIE SHOE UNIT

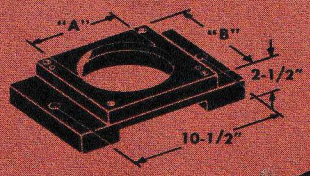


No. P-4" SQUARE DIE AND DIE SHOE UNIT

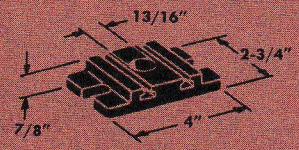


No. P-3" SQUARE DIE AND DIE SHOE UNIT

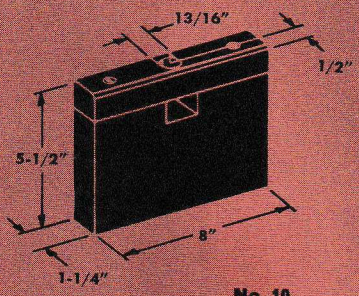
DIE AND DIE SHOE UNIT	
DIE SIZE "A"	DIM. "B"
5-7/8" to 6"	8"
6-1/8" to 7"	9"
7-1/8" to 8"	10"



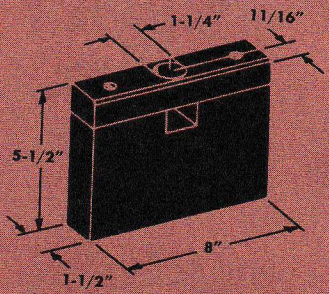
die shoes



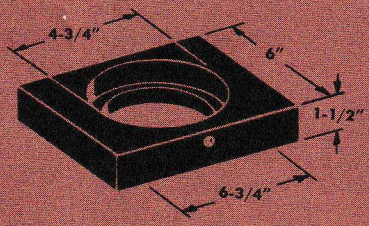
No. 203
$9.08
WEIGHT 3 LBS.



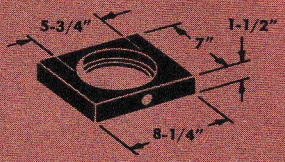
No. 10
$17.60
WEIGHT 17 LBS.



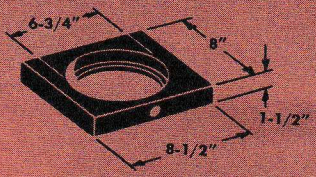
No. 20
$17.60
WEIGHT 17 LBS.



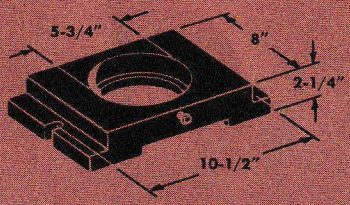
No. F 4-3/4
$33.00
WEIGHT 14 LBS.



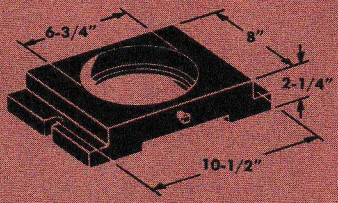
No. F 5-3/4
$60.50
WEIGHT 16 LBS.



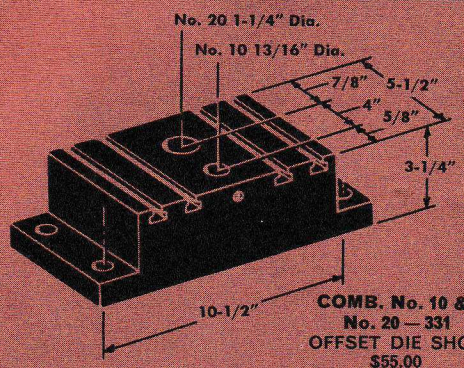
No. F 6-3/4
$77.00
WEIGHT 16 LBS.



No. P 5-3/4
$60.50
WEIGHT 35 LBS.



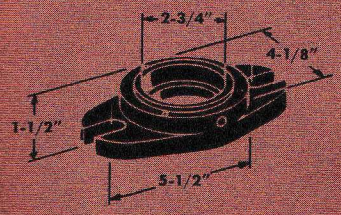
No. P 6-3/4
$77.00
WEIGHT 30 LBS.



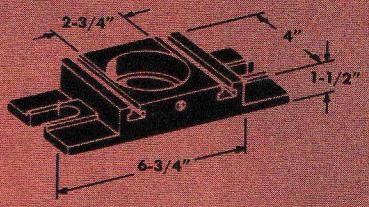
COMB. No. 10 & No. 20 — 331
OFFSET DIE SHOE
$55.00
WEIGHT 33 LBS.

die adaptors

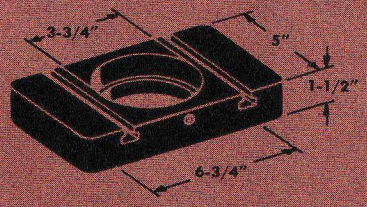
die adaptors
die shoes



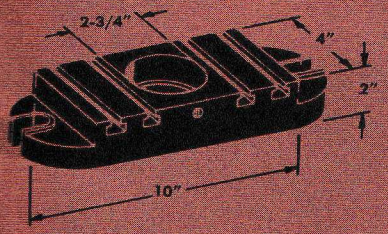
No. 118 — 2-3/4
$13.75
WEIGHT 5 LBS.



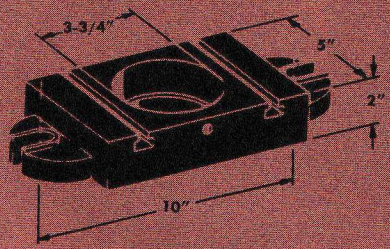
No. F 2-3/4
$13.75
WEIGHT 8 LBS.



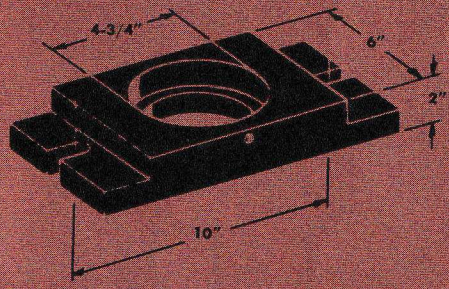
No. F 3-3/4
$24.20
WEIGHT 13 LBS.



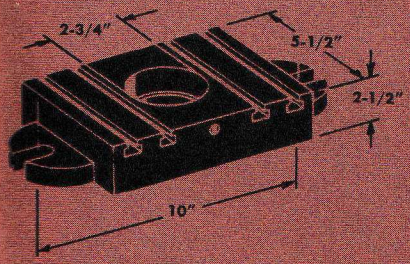
No. P 2-3/4
$18.15
WEIGHT 17 LBS.



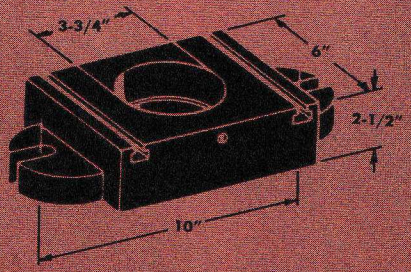
No. P 3-3/4
$24.20
WEIGHT 20 LBS.



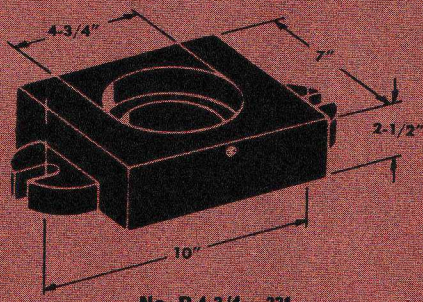
No. P 4-3/4
$33.00
WEIGHT 22 LBS.



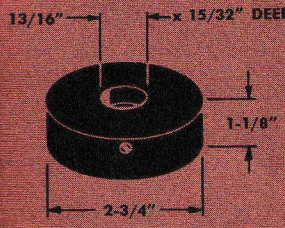
No. P 2-3/4 — 331
$44.00
WEIGHT 30 LBS.



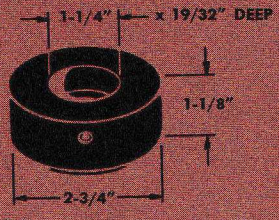
No. P 3-3/4 — 331
$49.50
WEIGHT 30 LBS.



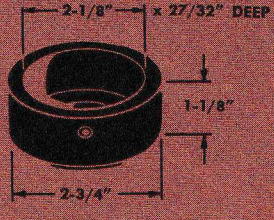
No. P 4-3/4 — 331
$55.00
WEIGHT 37 LBS.



No .10
$5.50

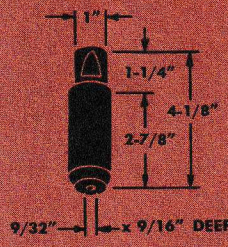


No. 20
$5.50

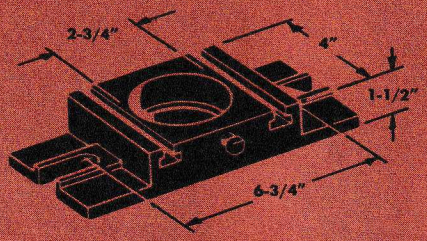


No. 40
$5.50

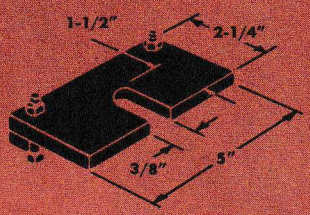
no. 5 punch and no. 10 die



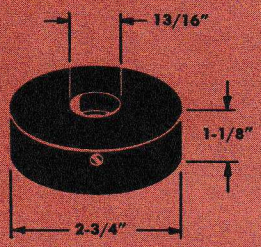
No. 5 PUNCH HOLDER
$8.25



No. F 2-3/4 DIE SHOE
$13.75

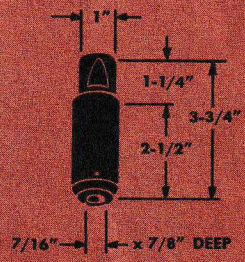


No. 5 STRIPPER
$11.00

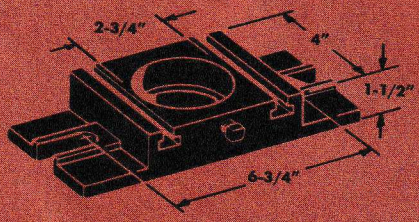


No. 10 DIE ADAPTOR
$5.50

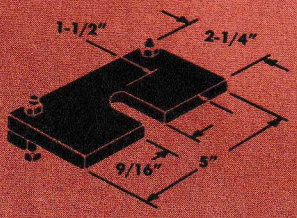
no. 7 punch and no. 10 die



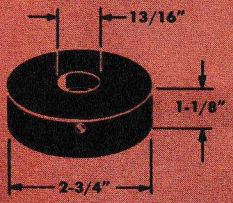
No. 7 PUNCH HOLDER
$8.25



No. F 2-3/4 DIE SHOE
$13.75

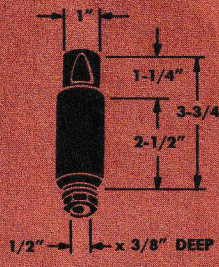


No. 7 STRIPPER
$11.00

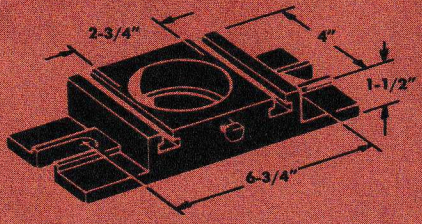


No. 10 DIE ADAPTOR
$5.50

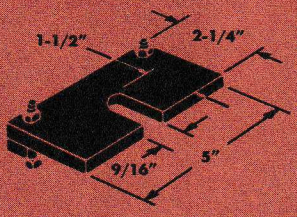
no. 10 punch and no. 10 die



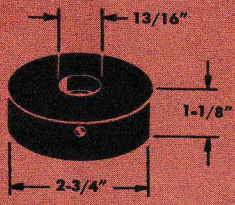
No. 10 PUNCH HOLDER
$9.35



No. F 2-3/4 DIE SHOE
$13.75

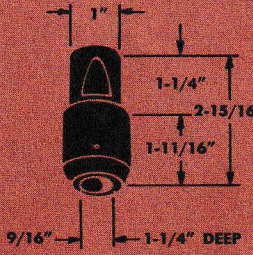


No. 10 STRIPPER
$11.00

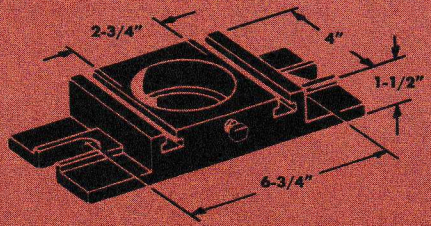


No. 10 DIE ADAPTOR
$5.50

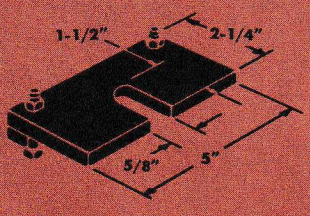
no. 16 punch and no. 20 die



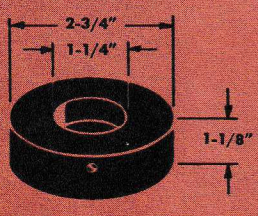
No. 16 PUNCH HOLDER
$8.25



No. F 2-3/4 DIE SHOE
$13.75



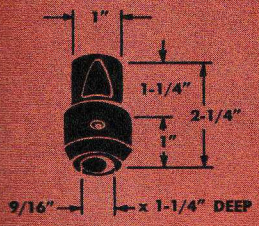
No. 17 STRIPPER
$11.00



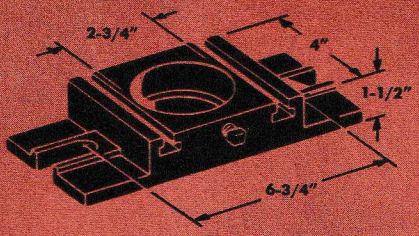
No. 20 DIE ADAPTOR
$5.50

punch and die combinations

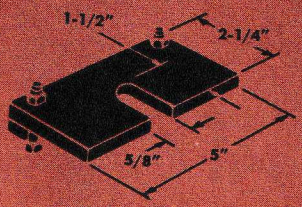
no. 17 punch and no. 20 die



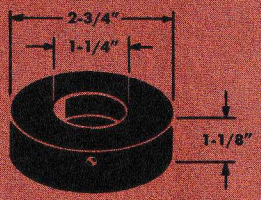
No. 17 PUNCH HOLDER
$8.25



No. F 2-3/4 DIE SHOE
$13.75

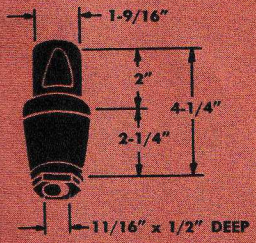


No. 17 STRIPPER
$11.00

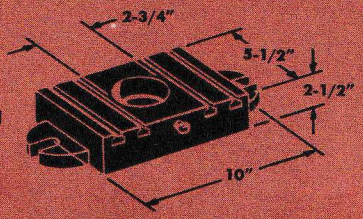


No. 20 DIE ADAPTOR
$5.50

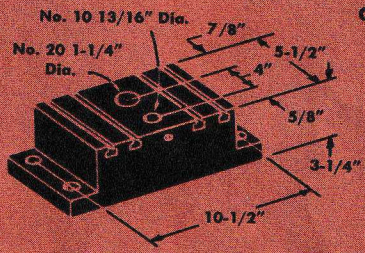
no. 20 punch and no. 20 die



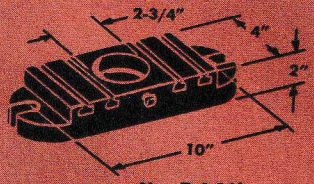
No. P 20 PUNCH HOLDER
$11.00



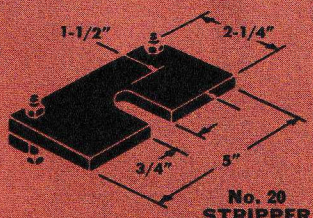
No. P 2-3/4-331 DIE SHOE
$44.00



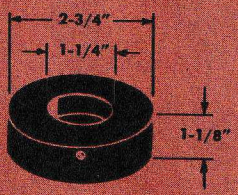
COMB. No. 10 & No. 20-331 OFFSET DIE SHOE
$55.00



No. P 2-3/4 DIE SHOE
$18.15

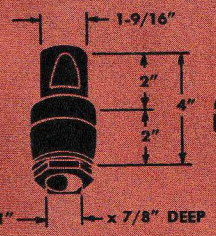


No. 20 STRIPPER
$11.00

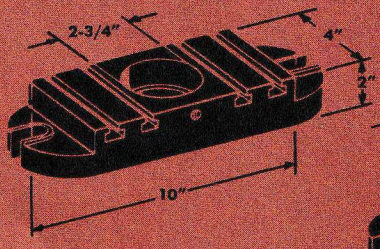


No. 20 DIE ADAPTOR
$5.50

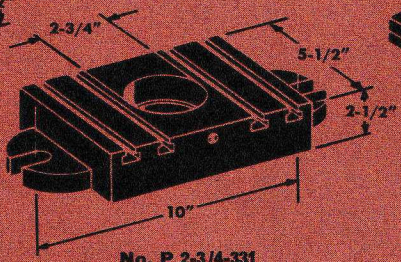
no. 40 punch and no. 40 die



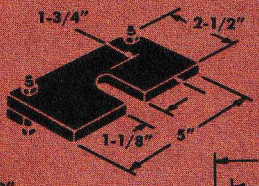
No. P 40 PUNCH HOLDER
$12.10



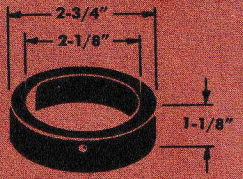
No. P 2-3/4 DIE SHOE
$18.15



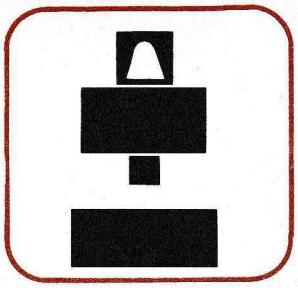
No. P 2-3/4-331 DIE SHOE
$44.00



No. 40 STRIPPER
$11.00



No. 40 DIE ADAPTOR
$5.50



type m and n

Punches have a 1″ shank and are 3-1/8″ overall length. For punches with a 1-9/16″ shank and 5-1/2″ overall length, add $19.80 to punch price. For punches with a 2″ shank and 6-1/2″ overall length, add $26.40 to punch price.

sketch hole size measure a

FOR TYPE M

FOR TYPE N

If A = 2-1/16″ to 3″, die will be 3-3/4″ O.D.
If A = 3-1/16″ to 4″, die will be 4-3/4″ O.D.
If A = 4-1/16″ to 5″, die will be 5-3/4″ O.D.

	Die Size	Punch Style	Punch Price	Die Style	Die Price	Price Per Set
type m	3-3/4″ O.D.	No. 28	$27.50	No. 28 — 3-3/4	$27.50	$55.00
	4-3/4″ O.D.	No. 28	38.50	No. 28 — 4-3/4	38.50	77.00
	5-3/4″ O.D.	No. 28	46.75	No. 28 — 5-3/4	46.75	93.50
type n	3-3/4″ O.D.	No. 28	$27.50	No. 28 — 3-3/4	$27.50	$55.00
	4-3/4″ O.D.	No. 28	33.00	No. 28 — 4-3/4	33.00	66.00
	5-3/4″ O.D.	No. 28	38.50	No. 28 — 5-3/4	38.50	77.00

soft blanks

Punches smaller than 1-1/4″, water hardening steel. Punches larger than 1-1/4″, oil hardening steel. No. 20 — 1-1/4″ dies, water hardening steel. No. 40 — 2-1/8″ dies, oil hardening steel. No. 28 — 2-3/4, 28 — 3-3/4, 28 — 4-3/4, oil hardening steel.

Punch Style	Punch Size	Punch Price	Die Style	Largest Hole Size	Die Price
No. 8	1/2″	$ .55	No. 20	13/16″	$ .55
No. 28	1″	1.10	No. 40	1-29/64″	2.20
No. 28	1-1/2″	2.75	No. 28 — 2-3/4	2″	3.03
No. 28	2″	3.85	No. 28 — 3-3/4	3″	4.40
No. 28	2-1/2″	4.95	No. 28 — 4-3/4	4″	6.60
No. 28	3″	7.15			
No. 28	3-1/2″	8.25			
No. 28	4″	9.35			

alloy steel

Special alloy steel round punches and dies for use with stainless steel.

Punch Style	Size Range	Punch Price	Die Style	Size Range	Die Price
No. 5	1/16″ thru 9/32″	$2.75	No. 5	1/16″ thru 9/32″	$5.50
No. 7	3/32″ thru 7/16″	4.95	No. 7	3/32″ thru 7/16″	5.50
No. 8	3/32″ thru 1/2″	4.95	No. 8	3/32″ thru 1/2″	5.50
No. 10	3/32″ thru 1/2″	6.60	No. 10	3/32″ thru 1/2″	4.40
No. 16	3/32″ thru 9/16″	6.60	No. 16	3/32″ thru 9/16″	5.50
No. 17	3/32″ thru 9/16″	6.60	No. 17	3/32″ thru 9/16″	5.50
No. 20	1/8″ thru 13/16″	7.15	No. 20	1/8″ thru 13/16″	5.50
No. 40	1/8″ thru 1″	9.35	No. 40	1/8″ thru 1-29/64″	6.60
No. 28	All sizes rounds, add 75% to standard punch and die prices.				
	All sizes irregulars, add 50% to standard punch and die prices.				

special tooling options

To produce flat blanks, remember that the die determines the blank size. Punch point must be ground flat and clearance is ground on the punch. Example: 1″ blank desired from 1/4″ mild steel. Die size, 1″; punch size, 0.975″.

Special F 5-3/4 die shoe (H 1-1/2″ x L 7-1/4″ x W 7″)	$60.50
Special F 6-3/4 die shoe (H 1-1/2″ x L 7-3/8″ x W 8″)	77.00
Special P5-3/4 die shoe (H 2-1/4″ x L 10-1/2″ x W 8″)	60.50
Special P6-3/4 die shoe (H 2-1/2″ x L 10-1/2″ x W 8″)	77.00
Solid center point (state length and diameter wanted), add to preceding punch prices	5.50
Spring center point (state length and diameter wanted), add to preceding punch prices	8.25
Tapped hole in punch point (state size wanted), add to preceding punch prices	5.50
For shear milled on punches (state shear wanted), add to preceding punch prices	2.75
For shear milled on dies (state shear wanted), add to preceding die prices	5.50
For blanking punches (produces flat blanks — state metal gauge), add 40% to preceding punch prices	
For radius on punch and die (state desired radius and metal gauge), add to preceding prices $5.50 per corner — $16.50 on all corners	
For heel on punches, add to preceding punch prices	8.25
For solid — not counterbored — dies (for heavy gauge metal), add 30% to preceding die prices	

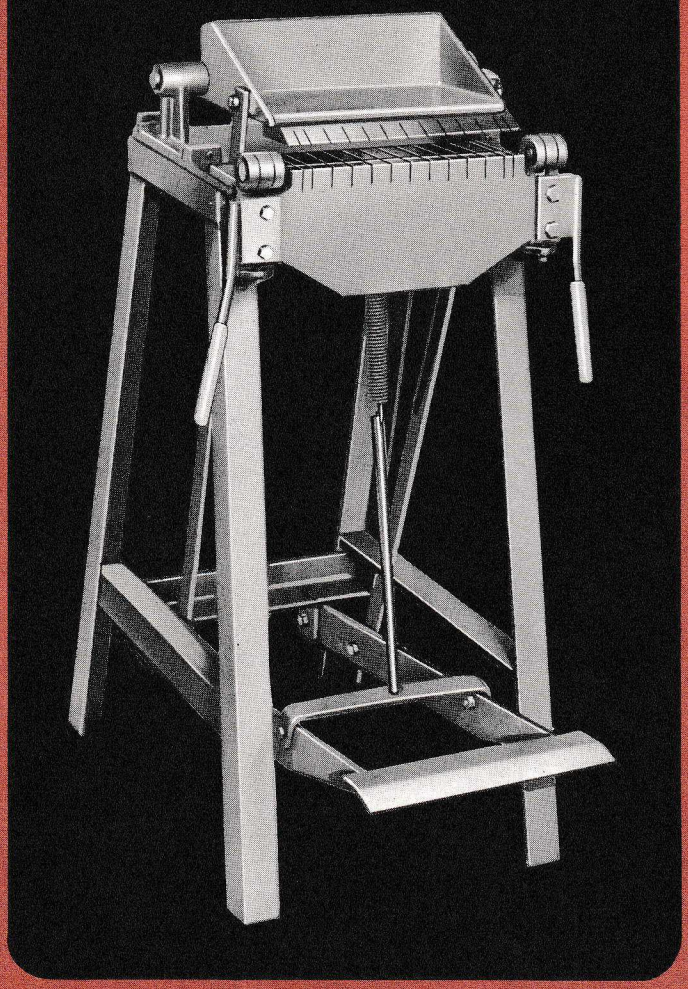
decimal equivalents

.204
.375
.625

Fraction	Decimal	Drill Size	Sheet Metal Gauge	Fraction	Decimal	Drill Size	Sheet Metal Gauge	Fraction	Decimal	Drill Size	Sheet Metal Gauge	Fraction	Decimal	Drill Size	Sheet Metal Gauge
1/64	.01563				.1015	38			.201	7			.386	W	
	.0164		27		.104	37		13/64	.20313			25/64	.39063		
	.0179		26		.1046		12		.204	6			.397	X	
	.0209		25		.1065	36			.2055	5			.404	Y	
	.0239		24	7/64	.10938				.2092		5	13/32	.40625		0000
	.0269		23		.110	35			.209	4			.413	Z	
	.0299		22		.111	34			.213	3		27/64	.42188		
1/32	.03125				.113	33		7/32	.21875			7/16	.4375		00000
	.0329		21		.116	32			.221	2		29/64	.45313		
	.0359		20		.1196		11		.2242		4	15/32	.46875		000000
	.040	60			.120	31			.228	1		31/64	.48438		
	.041	59		1/8	.125				.234	A		1/2	.500		0000000
	.0418		19		.1285	30		15/64	.23438			33/64	.51563		
	.042	58			.1345		10		.238	B		17/32	.53125		
	.043	57			.136	29			.2391		3	35/64	.54688		
	.0465	56			.1405	28			.242	C		9/16	.5625		
3/64	.04688			9/64	.14063				.246	D		37/64	.57813		
	.0478		18		.144	27		1/4	.250	E		19/32	.59375		
	.052	55			.147	26			.257	F		39/64	.60938		
	.0538		17		.1495	25	9		.261	G		5/8	.625		
	.055	54			.152	24		17/64	.26563		2	41/64	.64063		
	.0595	53			.154	23			.266	H		21/32	.65625		
	.0598		16	5/32	.15625				.272	I		43/64	.67188		
1/16	.0625				.157	22			.277	J		11/16	.6875		
	.0635	52			.159	21			.281	K		45/64	.70313		
	.067	51			.161	20		9/32	.28125		1	23/32	.71875		
	.0673		15		.1644		8		.290	L		47/64	.73438		
	.070	50			.166	19			.295	M		3/4	.750		
	.073	49			.1695	18		19/64	.29688			49/64	.76563		
	.0747		14	11/64	.17188				.302	N		25/32	.78125		
	.076	48			.173	17		5/16	.3125		0	51/64	.79688		
5/64	.07813				.177	16			.316	O		13/16	.8125		
	.0785	47			.1793		7		.323	P		53/64	.82813		
	.081	46			.180	15		21/64	.32813			27/32	.84375		
	.082	45			.182	14			.332	Q		55/64	.85938		
	.086	44			.185	13			.339	R		7/8	.875		
	.089	43		3/16	.1875			11/32	.34375		00	57/64	.890625		
	.0897		13		.189	12			.348	S		29/32	.90625		
	.0935	42			.191	11			.358	T		59/64	.921875		
3/32	.09375				.1935	10		23/64	.35938			15/16	.9375		
	.096	41			.1943		6		.368	U		61/64	.953125		
	.098	40			.196	9		3/8	.375		000	31/32	.96875		
	.0995	39			.199	8			.377	V		63/64	.984375		

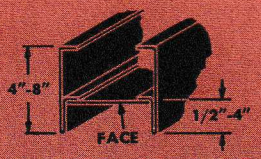
letter forming brake

no. 99

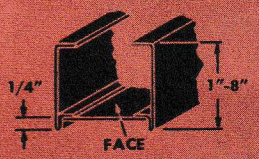


This small bending brake, with its slotted jaws and apron, provides speed and economy in a number of awkward metal-working operations. It is specially designed for bending up sheet metal strips on which one or more bent-up edges or seams have already been formed. A typical example is the forming of "drum return" used on metal sign letters. The upper jaw is in the form of an open box to provide adequate stiffness yet remove sufficient superstructure so that the strip undergoing a series of folds can be laid back closely over the top of the machine. The brake can be moved easily around a shop to the most convenient position and is also light enough to be trucked to an installation location.

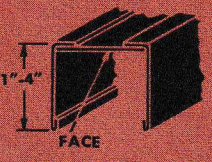
Three types of drum return formed on the No. 99 Letter Forming Brake



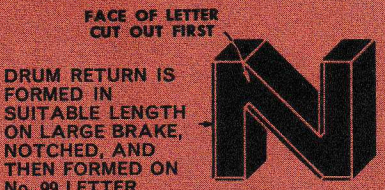
CHANNEL BLOCK TYPE
(WITH RACEWAY FOR WIRING, TRANSFORMER, ETC.)



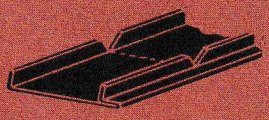
BLOCK TYPE
(USED PLAIN OR ILLUMINATED)



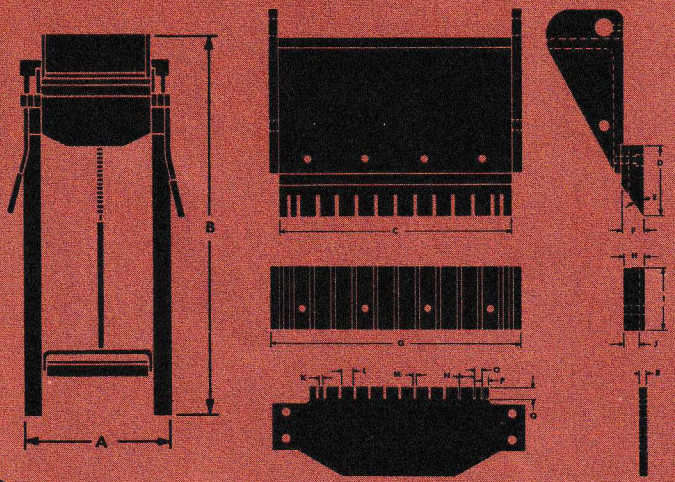
CHANNEL TYPE
(NEON OR INCANDESCENT PROTECTED TYPE)



DRUM RETURN IS FORMED IN SUITABLE LENGTH ON LARGE BRAKE, NOTCHED, AND THEN FORMED ON No. 99 LETTER FORMING BRAKE.



DRUM RETURN VARIES IN THICKNESS FROM 24 GA. THRU 18 GA. FACE IS USUALLY 14 GA. AND IS EITHER ARC OR SPOT WELDED TO THE THE RETURN.



dimensions

A	24"	J	49/64"
B	39"	K	5/16"
OVERALL DEPTH AT BASE	29"	L	13/16"
C	12"	M	3/16"
D	3-3/4"	N	1"
E	35°	O	1/2"
F	1-3/16"	P	1/2"
G	12"	Q	49/64"
H	15/16"	R	1/2"
I	2-15/16"		

specifications

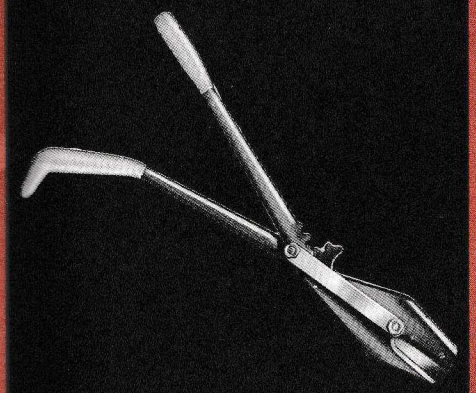
Capacity (mild steel)	20 ga.	Max. opening between jaws	1-1/2"
Max. bending length	12"	Weight	185 lbs.
Slot depths	3/4"		

net price

(F.O.B. Factory) $220.00

manual shears

no. 2 SHEAR



A versatile stock shear for cutting sheets too large for bench shears and for gauges too heavy to be handled with tinner's snips. Powerful gear tooth action exerts enough pressure to bite through 1/8" mild steel. Shear has removable blades for sharpening or replacement.

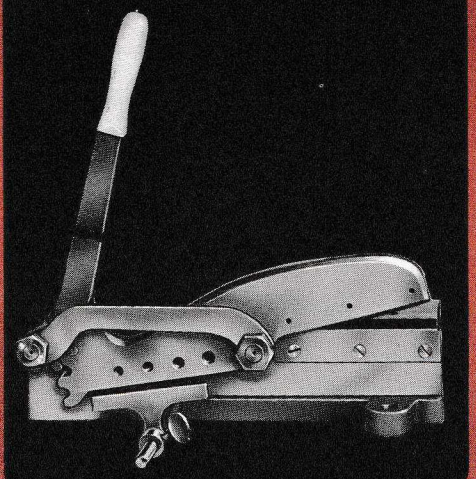
specifications

Capacity, mild steel	1/8"
Length overall	26-1/2"
Length of shear blades	3-1/2"
Weight	13-1/4 lbs.

net prices (F.O.B. Factory)

No. 2 Shear complete	$42.35
Upper Shear Blade	2.75
Lower Shear Blade	2.75

no. 3 BENCH SHEAR



This bench shear cuts flats or rounds and is available with hi-speed blades for stainless or carbon steel blades for mild steel. Geared action provides plenty of power for cutting up to 1/8" mild steel. Adjustable side gauge for guiding the sheet.

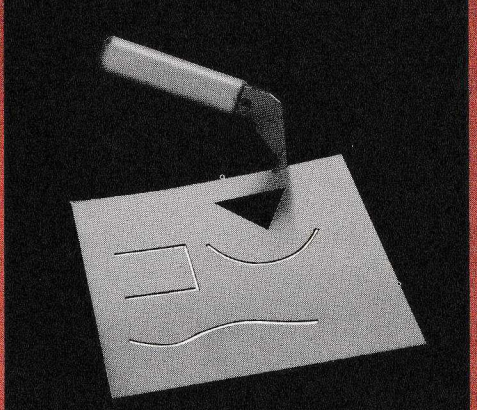
specifications

Capacity, mild steel	1/8"
Capacity, stainless steel	3/32"
Capacity, M.S. or stainless rounds	1/8", 3/16", 1/4", 5/16"
Length overall	16"
Height, not including handle	6"
Width overall	6"
Length of blades	5"
Length of handle	16"
Weight	24 lbs.

net prices (F.O.B. Factory)

No. 3 Shear w/carbon steel blades	$79.00
No. 3 Shear w/hi-speed blades	88.90
Upper or Lower carbon steel blades	3.30 Ea.
Upper or Lower hi-speed blades	8.25 Ea.
Cutting Dies (state size) per pair	1.65

no. 14 RIPPING SHEAR



A handy tool for ripping light gauge sheet metal. A light blow with a hammer will insert the shearing point and successive blows will drive shear on a scribed line for just about any shape. Approximately 3/32" strip of metal is removed in the shearing operation.

specifications

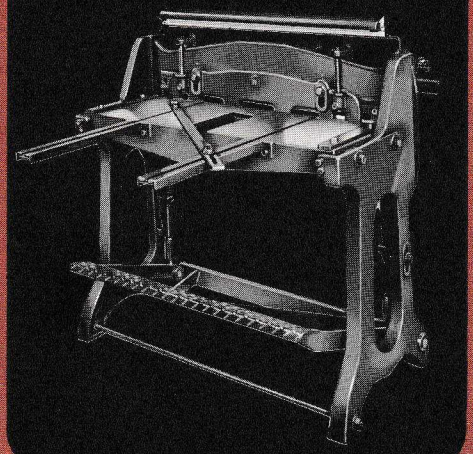
Capacity, mild steel	24 ga.
Length overall	7-3/4"
Weight	4 oz.

net price (F.O.B. Factory)

No. 14 Ripping Shear	$2.48

manual shears

no. 30
FOOT SQUARING SHEAR



This compact foot squaring shear cuts through 18 ga. mild steel across a full 36" length. Available with carbon steel or hi-speed blades. An optional fluorescent light fixture mounted directly over the blades aids operator in shearing to a scribed line.

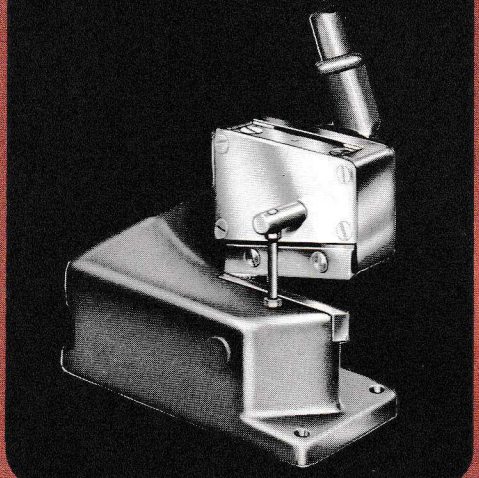
specifications

Capacity, mild steel	18 ga.
Cutting length	36"
Length of shear blades	37"
Back Gauge Range, max.	24"
Front Gauge Range, max.	31"
Floor Space overall	45" x 50"
Height overall	41-1/2"
Weight	670 lbs.

net prices (F.O.B. Factory)

No. 30 Shear w/carbon steel blades and light	$542.00
No. 30 Shear w/carbon steel blades, w/o light	520.00
No. 30 Shear w/Hi-speed blades and light	656.00
No. 30 Shear w/Hi-speed blades, w/o light	634.00
No. 30 Carbon Steel Blades	150.00
No. 30 Hi-speed Blades	264.00

no. 38
THROATLESS BENCH SHEAR



The No. 38 Throatless Bench Shear will split or shear sheets or flats of any dimension up to 3/16" mild steel. The crank turns on roller bearings and the slide is actuated by another roller bearing, thereby reducing friction to a minimum. Furnished with 30" operating handle.

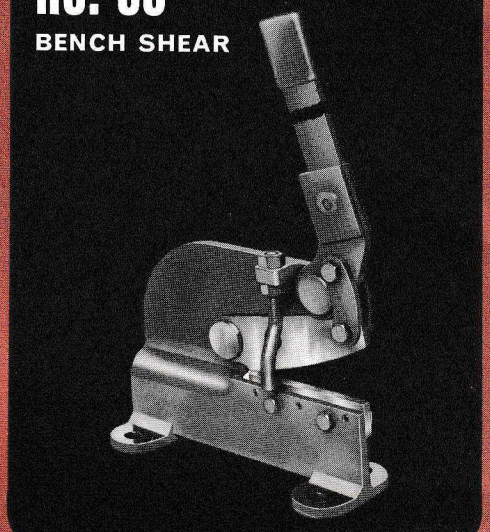
specifications

Capacity, mild steel	3/16"
Capacity, stainless	5/32"
Length	11"
Width	7-1/2"
Height	9"
Length of shear blades	5"
Weight	45 lbs.

net prices (F.O.B. Factory)

No. 38 Shear w/carbon steel blades	$ 90.75
No. 38 Shear w/hi-speed blades	105.27
Upper or Lower carbon steel blades	4.84 Ea.
Upper or Lower hi-speed blades	12.10 Ea.

no. 39
BENCH SHEAR



This light-weight bench shear features roller bearings at hinge points for smooth, easy operation. Shears mild steel bars to 3/16" x 2", flats 10 ga., rounds 7/16" and 1/8" angle iron. 30" operating handle furnished.

specifications

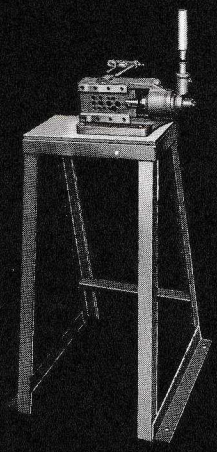
Length	10"
Width overall	4"
Height w/o handle	11-1/2"
Length of shear blades	4-1/16"
Weight	18 lbs.

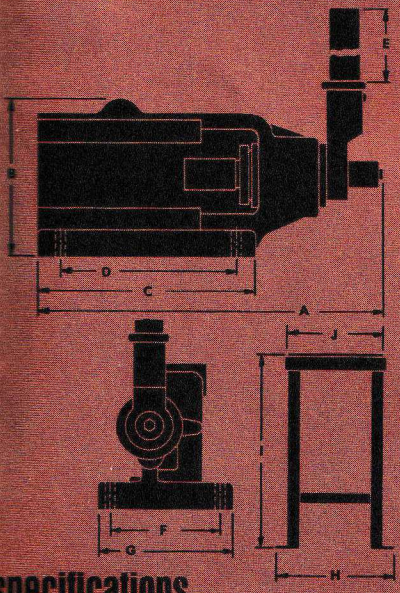
net prices (F.O.B. Factory)

No. 39 Shear w/carbon steel blades	$60.50
No. 39 Shear w/hi-speed blades	78.65
Upper carbon steel blade	12.10
Lower carbon steel blade	6.05
Upper hi-speed blade	24.20
Lower hi-speed blade	12.10
Cutting Die	2.09

rod cutters

nos. 21, 22 ROD CUTTERS





These rod cutters are actuated by a ball bearing screw movement providing fast, easy shearing. All holes are approximately .005" oversize so that rods are cut with minimum distortion. Both cutters are equipped with a gauge that adjusts from 7/8" to 11" and automatically moves away from the work after shearing. A 28" operating handle furnished with No. 21, 54" with No. 22. Both cutters are available with floor stand.

dimensions

A	15"	F	5"
B	6-3/4"	G	6-1/8"
C	9-1/4"	H	24"
D	7-5/8"	I	32-1/4"
E (No. 21)	28"	J	17"
E (No. 22)	54"		

FLOOR STAND FRONT TO BACK AT BOTTOM ..... 29"
FLOOR STAND FRONT TO BACK AT TOP ..... 10"

specifications

No. 21 will shear 1/8", 5/32", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8" round rods, cold finished mild steel; 1/4", 3/8", 1/2" square rods, cold finished mild steel.

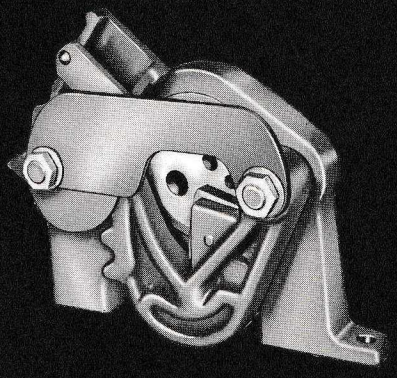
No. 22 will shear 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1" round rods cold finished mild steel; 5/8", 3/4", 7/8" square rods, cold finished mild steel.

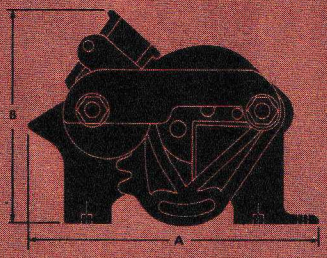
Weights	21	22
Without floor stand	70 lbs.	149 lbs.
With floor stand	125 lbs.	189 lbs.

net prices (F.O.B. Factory)

	21	22
Without floor stand	$266.20	$425.00
With floor stand	296.45	455.25
Movable Die (for replacement)	66.55	84.70
Stationary Die (for replacement)	66.55	84.70
Coupling Nut	3.03	5.50

no. 400 ROD CUTTER





dimensions

A ..... 13-1/2"
B ..... 10"
BAR HANDLE 72"

The No. 400 Rod Cutter can be bench mounted or used portably. Shear blade and base shearing die are replaceable. Die hole sizes are 5/16", 17/32", 25/32". Unit is furnished with operating bar handle.

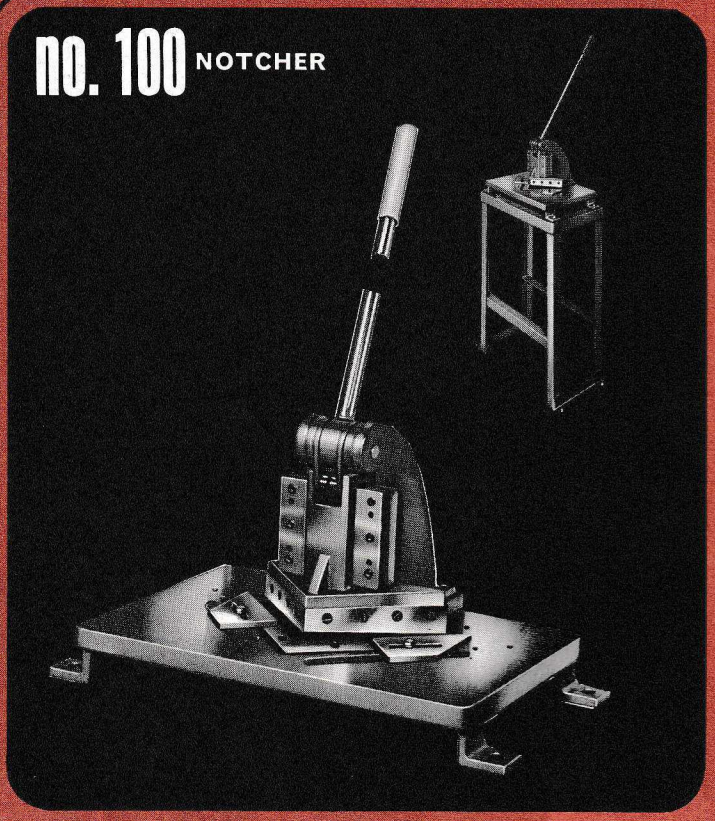
specifications

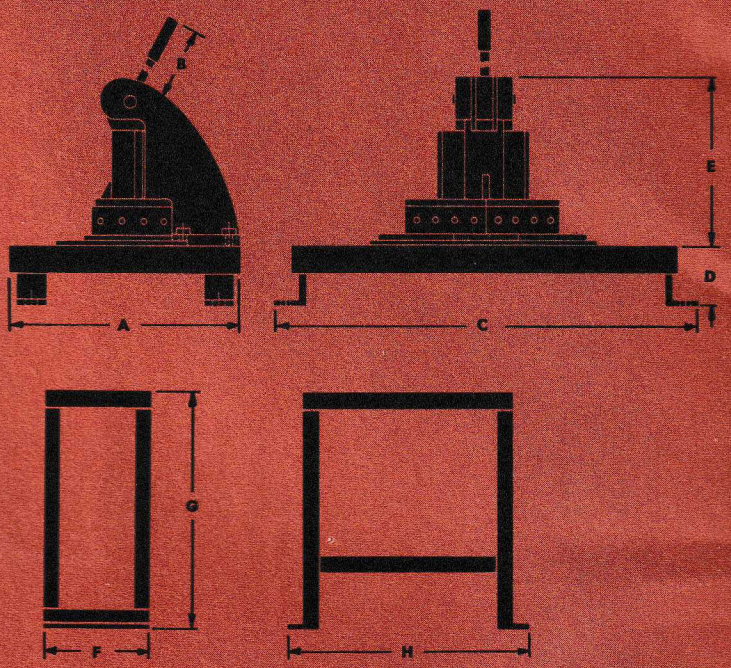
Capacity, reinforcing bars	1/8" thru 5/8"
Capacity, mild steel rods	1/8" thru 3/4"
Weight with 72" operating bar handle	49 lbs.

net prices (F.O.B. Factory)

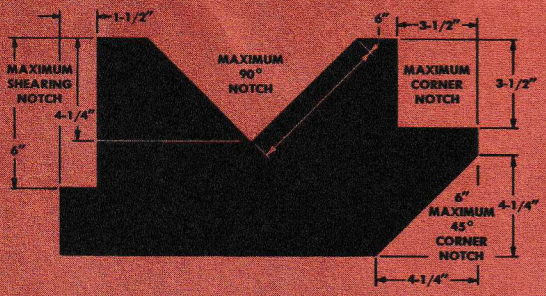
No. 400 Rod Cutter complete	$72.60
No. 400 Shear Blade	7.26
No. 400 Base Shearing Die	18.98

no. 100 NOTCHER





The No. 100 Notcher removes and trims sheet metal up to 16 ga. to form all kinds of special shapes. Optional box flange blades can be used to speed the forming of boxes. Heavy duty bearings give smooth operation, 30° angle ram with adjustable gibs assure blade alignment. Lower blade adjusts quick and easy. A 6" scale is set on each side of the lower 90° blade and an adjustable gauge is mounted on each scale for fast, simple set-ups on duplicate notching jobs. Floor stand is available.



dimensions

A	12-1/2"	E	9"
B	24"	F	12"
C	21-1/4"	G	32"
D	2-1/2"	H	24-1/2"

specifications

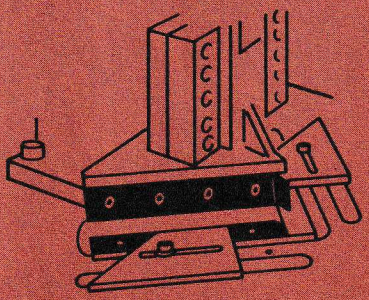
Standard equipment includes one set of 90° blades.

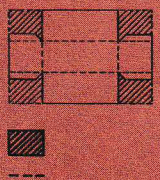
Capacity, mild steel	6" x 6" x 90° notch in 16 ga.
Weight without floor stand	110 lbs.
Weight with floor stand	145 lbs.

net prices (F.O.B. Factory)

No. 100 Notcher without floor stand	$242.00
No. 100 Notcher with floor stand	266.20
Set of two 90° upper replacement blades	12.70
Set of two 90° lower replacement blades	13.65
Set of two 90° hi-speed upper replacement blades	25.65
Set of two 90° hi-speed lower replacement blades	28.80
Special Box Flange blades, complete	48.40

special box flange blades





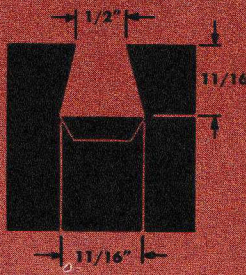
TRIM & NOTCH BEND

Notching to form boxes can be accelerated with special box flange blades.

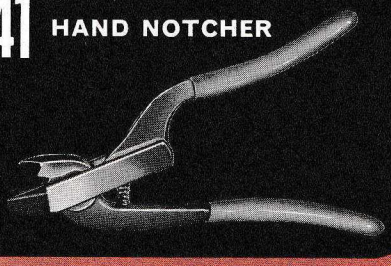
metal notchers

no. 121 DOVETAIL NOTCHER

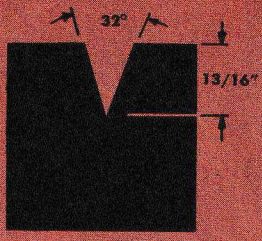
A light, fast-working, handy-size tool for dovetailing during installation of collars, stubs, Y-joints, etc. Spring-return jaws. Cuts notch and folds tab down square in one easy motion. Maximum capacity is 20 ga. mild steel. Overall length of tool is 8-1/2", weighs 1 lb. Net price (F.O.B. Factory) $9.35.



no. 141 HAND NOTCHER



Designed for fast, accurate 32° notch in sheet metal. Hook design of jaws permits notching to exact desired depth without slippage and with minimum effort. Spring-return jaws. Maximum capacity is 20 ga. mild steel. Overall length 9", weight 1 lb. Net price (F.O.B. Factory) $9.35.



no .241 HAND NOTCHER

The No. 241 Hand Notcher can be used for notching, coping, and corner shearing. It is excellent for notching counter molding. The hooked form of the upper blade permits accurate control of depth of notch, prevents slippage, and produces a shearing cut. A kit is available to make this tool into a bench-mounted, foot-operated unit.

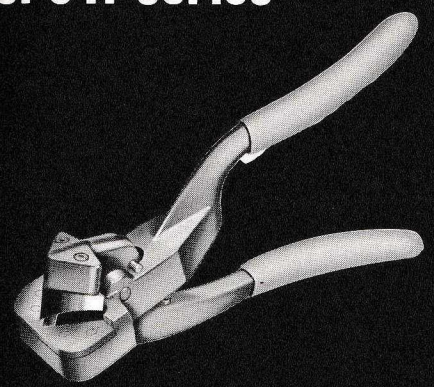
specifications

Capacity, mild steel ..... 16 ga.
Angle of notch ..... 90°
Depth of notch, max. ..... 1"
Length overall ..... 21"
Weights: No. 241 notcher 7 lbs., foot treadle parts 8-1/2 lbs., bench base 1-1/2 lbs.

net prices (F.O.B. Factory)

No. 241 Notcher	$36.30
Upper notcher replacement blade	6.60
Lower notcher replacement die	6.60
Foot treadle parts	19.80
Bench base	8.80

no. 541 series



A group of seven different tools for notching and square and round coping. 90°, 45° and special angle blades and dies will fit only Nos. 541, 542, 543 tools. The square and round coping blades and dies will fit only Nos. 544 and 545 tools. Maximum capacity of tools is 20 ga. mild steel. Length is 9", weight 2 lbs.

specifications and net prices (F.O.B. Factory)

COMPLETE TOOLS

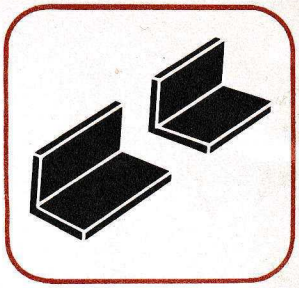
No. 541	90° Hand Notcher with 90° blade and die	$16.50
No. 542	45° Hand Notcher with 45° blade and die	16.50
No. 543	Special Angle Hand Notcher (specify angle between 90° and 30°)	38.50
No. 544	Square Coping Hand Notcher (5/8" W x 7/8" D standard)	38.50
No. 544S	Square Coping Special Hand Notcher (state size wanted)	38.50
No. 545	Round Coping Hand Notcher (5/8" W x 7/8" D standard)	38.50
No. 545S	Round Coping Special Hand Notcher (state size wanted)	38.50

BLADES AND DIES ONLY

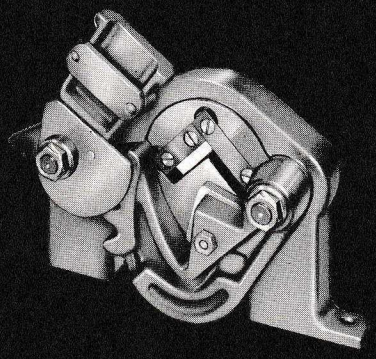
No. 541	90° Upper blade	$5.78
No. 541	90° Lower die	2.20
No. 542	45° Upper blade	7.15
No. 542	45° Lower die	2.20
No. 543	Special angle blade and die — state angle desired (set only)	27.50
No. 544	Square coping upper blade (5/8" W x 7/8" D standard)	16.50
No. 544	Square coping lower die (5/8" W x 7/8" D standard)	11.00
No. 544S	Special square coping blade and die — state size desired (set only)	27.50
No. 545	Round coping upper blade (5/8" W x 7/8" D standard)	16.50
No. 545	Round coping lower die (5/8" W x 7/8" D standard)	11.00
No. 545S	Special round coping blade and die — state size desired (set only)	27.50

Square or round coping blades max. 5/8" wide x 7/8" deep, min. 1/8" wide x 7/8" deep.

angle iron shears



no. 4 ANGLE IRON SHEAR



Since the extreme capacity of this tool is accomplished by a shearing action, there is a bending-out or distortion of one leg of the angle iron when using the standard movable shear blade. To avoid this distortion, a contour movable shear blade is offered. This blade will shear specified sizes of angle iron with a straight cut having no distortion of the angle iron. However, with the contour movable shear blade, capacity is reduced to 2" x 2" x 3/16" mild steel angle iron.
The No. 4 contour movable shear blade will shear mild steel angles in sizes listed without distorting the angle iron.
1/2" x 1/2" x 1/8" — 3/4" x 3/4" x 1/8"
1" x 1" x 1/8" — 1-1/4" x 1-1/4" x 1/8"
1-1/2" x 1-1/2" x 1/8" — 1-3/4" x 1-3/4" x 1/8" — 1" x 1" x 3/16"
1-1/4" x 1-1/4" x 3/16" — 1-1/2" x 1-1/2" x 3/16" — 1-3/4" x 1-3/4" x 3/16"
2" x 2" x 3/16".

specifications

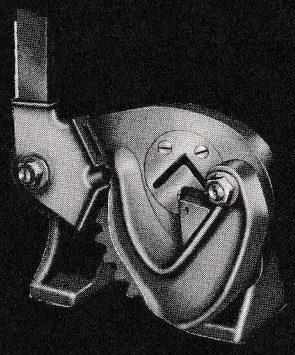
Capacity, all sizes of angle iron including	2" x 2" x 1/4"
Height of shear	10"
Length of shear	13-1/2"
Width of shear (with stock support stud in place)	7"
Weight, including 72" operating bar handle	49 lbs.

net prices (F.O.B. Factory)

No. 4 Shear with standard blade	$78.65
No. 4 Shear with contour blade	78.65
No. 4 Shear with blade for 2"x2"x1/8" angle*	81.40
No. 4 Standard shear blade, for replacement	7.26
No. 4 Contour shear blade, for replacement	7.26
Special No. 4 shear blade for 2"x2"x1/8", for replacement*	9.90
Base shearing blades (two pieces), for replacement	15.13
Base shearing die (old style round), for replacement	18.98

*Shearing 2" x 2" x 1/8" angle without distortion requires a special blade which also cuts other sizes as shown for contour blade.

no. 62 ANGLE IRON SHEAR



This shear will distort one end of the angle being sheared. Distortion is corrected by hammering distorted end of angle. Shear is furnished with a 72" operating bar handle. Full cut requires handle to be inserted in each of three sockets.

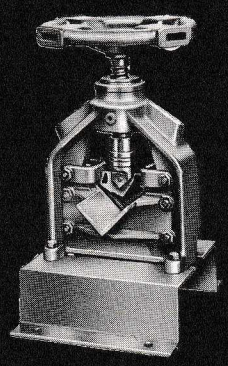
specifications

Capacity, all sizes of angle iron including	3" x 3" x 1/4"
Height of shear	14"
Length of shear	18"
Width of shear (with stock support in place)	11"
Weight including 72" operating bar handle	162 lbs.

net prices (F.O.B. Factory)

No. 62 Shear with 72" operating bar handle	$181.50
Movable shear blade, for replacement	13.20
Base shearing die, for replacement	33.00

no. 162 DOUBLE CUT ANGLE IRON SHEAR



The No. 162 double cut shear will not distort either leg of angle iron. Angle legs must be equal or damage to blade and holder may result. Because of the double cut action, a 3/8" section of the angle is cut out. Ball bearings minimize manual effort. Upper blade and lower dies are replaceable. Shear is furnished with base and 72" operating bar handle.

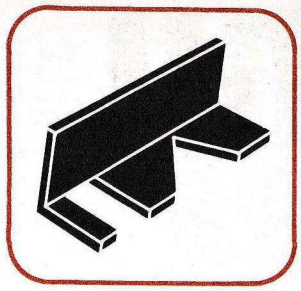
specifications

Capacity, all sizes of angle iron including	3" x 3" x 1/4"
Height of shear	21"
Length of shear	11"
Width of shear	7"
Weight including 72" operating bar handle	142 lbs.

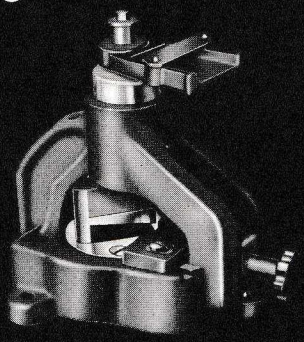
net prices (F.O.B. Factory)

No. 162 Shear complete	$247.50
Upper shear blade, for replacement	5.50
Lower die set (four), for replacement	19.25

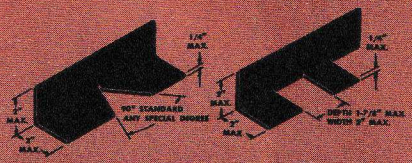
angle iron notchers and combination



no. 50 NOTCHER



The No. 50 Angle Iron Notcher is a useful tool for notching or coping angle iron. It can be used in the shop or on the job site. Standard equipment includes one 32" operating bar handle and 90° blade and die. Coping and special degree notching blades and dies are available.



specifications

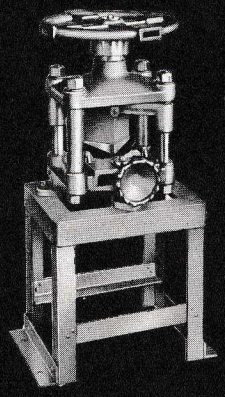
Capacity, all sizes of angle iron including	2" x 2" x 1/4"
Height overall	12"
Width overall	9-1/2"
Length overall	13"
Weight including 32" operating bar handle	55 lbs.

net prices (F.O.B. Factory)

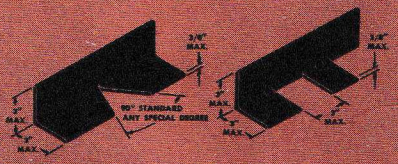
No. 50 Notcher with standard equipment	$151.25
No. 50 90° upper blade, for replacement	6.05
No. 50 90° lower die, for replacement	27.50
No. 50 special degree unit (state desired angle)*	99.00
No. 50 coping unit (state size, max. 2" x 1-7/8")*	99.00

*Includes blade, die, and blade holder.

no. 60 NOTCHER



The No. 60 Angle Iron Notcher is very useful in notching or coping angle iron beyond the capacity of the No. 50 Angle Iron Notcher. Standard equipment includes 90° notching blade and die, one 32" operating bar handle, mounted on floor stand. Special degree notching blades and dies, and coping blades and dies are also available.



specifications

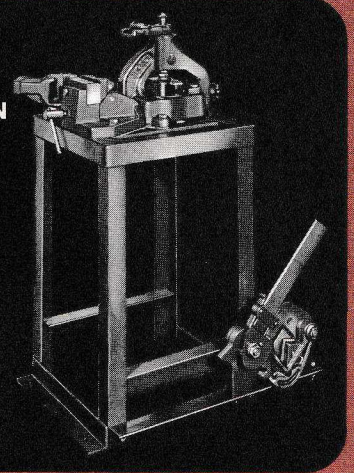
Capacity, all sizes of angle iron including	3" x 3" x 3/8"
Height overall	37"
Width overall	13"
Length overall	17"
Weight including 32" operating bar handle	229 lbs.

net prices (F.O.B. Factory)

No. 60 Notcher with standard equipment	$330.00
No. 60 upper blade 90°, for replacement	22.00
No. 60 lower die 90°, for replacement	36.30
No. 60 special degree unit (state desired angle)*	103.40
No. 60 coping unit (state size, max. 3" x 3")*	103.40

*Includes blade, die, and blade holder.

no. 455 COMBINATION SHEAR NOTCHER BENDER



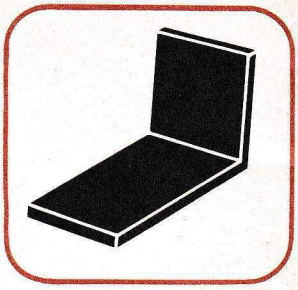
This entire unit is a must whenever angle iron is fabricated. Consists of No. 4 angle iron shear, No. 50 angle iron notcher and No. 51 angle iron bender . . . all mounted on sturdy floor stand. 72" operating bar handle is furnished.

specifications

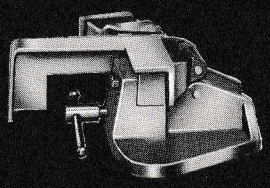
Capacity, all sizes of angle iron including	2" x 2" x 1/4"
Height overall	33"
Floor space required	21-1/2" x 26"
Weight	200 lbs.

net price (F.O.B. Factory)

No. 455 Combination	$330.00



no. 51 ANGLE IRON BENDER



The No. 51 Angle Iron Bender, a companion tool to the No. 4 Angle Iron Shear and No. 50 Angle Iron Notcher, will bend all sizes, through capacity, of angle iron as well as flat bars. Standard equipment includes one 32" operating bar handle.

specifications

Capacity, all sizes of angle iron including	2" x 2" x 1/4"
Height overall	5"
Width overall	10"
Length overall	15"
Weight including 32" operating bar handle	50 lbs.

net price (F.O.B. Factory)

No. 51 Angle Iron Bender	$66.55

no. 61 ANGLE IRON BENDER

The No. 61 Angle Iron Bender, a companion tool to the No. 62 and No. 162 Angle Iron Shears and No. 60 Angle Iron Notcher, will bend all sizes, through capacity, of angle iron as well as flat bars. Standard equipment includes four 18" operating bar handles and floor stand.

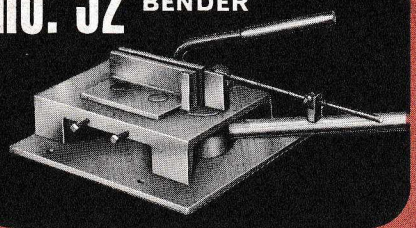
specifications

Capacity, all sizes of angle iron including	3" x 3" x 3/8"
Height overall	29"
Width overall	13"
Length overall	19-1/2"
Weight including stand and handles	205 lbs.

net price (F.O.B. Factory)

No. 61 Angle Iron Bender	$330.00

no. 52 BENDER



The No. 52 Bender is easy to operate, fast and ruggedly built. After initial setting, patented adjustment automatically compensates for the thickness of metal and will always produce good square bends in round solid bars, flats, and angles. An adjustable gauge (maximum extension 12") is provided for duplicating bends. A 30" operating bar handle is furnished with each bender.

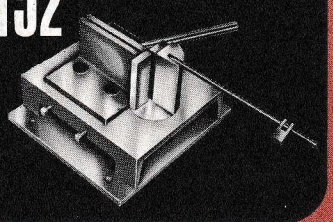
specifications

Capacity, mild steel	1/2" round solid bars 1/4" x 2" flat bars 1/4" x 2" notched angle iron
Minimum Square obtainable	6-1/2" x 6-1/2", height 2"
Minimum Rectangle obtainable	6-1/2" x 1", height 1-3/4" 6-1/2" x 3-1/4", height 2"
Height overall	7-1/2"
Width overall	12"
Length overall	13-1/2"
Weight with 30" bar handle	58 lbs.

net price (F.O.B. Factory)

No. 52 Bender	$66.55

no. 152 BENDER



The No. 152 Bender is similar in design and operation to the No. 52 Bender, varying mainly in capacity. The No. 152 Bender has greater capacity, thereby permitting a larger range of work such as forming copper buss bar up to 1/4" x 4". After initial setting, patented adjustment automatically compensates for the thickness of metal and will produce bends with a minimum radius. An adjustable gauge will aid in duplicating bends. A 48" solid round bar handle is furnished.

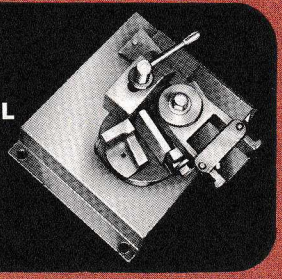
specifications

Capacity	mild steel 5/8" round solid bars mild steel 1/4" x 2-1/2" flat bars aluminum 1/4" x 4" flat bars copper 1/4" x 4" flat bars mild steel 1/4" x 2" notched angle iron
Minimum square obtainable	7" x 7" x 4"
Minimum rectangle obtainable	2" x 7" x 3-1/2" 4" x 7" x 4"
Height overall	8"
Width overall	13"
Length overall	12"
Weight with 48" bar handle	75 lbs.

net price (F.O.B. Factory)

No. 152 Bender	$132.00

no. 53 UNIVERSAL BENDER



The No. 53 Universal Bender serves usefully in the shop, forming flat bars and angles to desired shapes. A 72" operating bar handle is furnished.

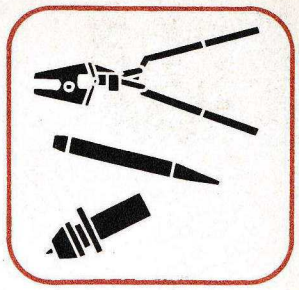
specifications

Capacity, mild steel	2-1/2" x 2-1/2" x 3/8" notched angle iron 2" x 1/2" flat bars
Minimum square obtainable	3" x 3"
Minimum rectangle obtainable	2-1/4" x 3"
Height overall	6-1/2"
Width overall	12"
Length overall	15-1/2"
Weight with 72" bar handle	75 lbs.

net price (F.O.B. Factory)

No. 53 Universal Bender	$108.90

sheet metal hand tools



no. 00 SOLID PUNCHES

Round handle solid punches available in following stock sizes:
3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8", 13/32", 7/16", 15/32", 1/2", 5/8". Handle diameter is 5/8", length overall 6". Weight 8 oz.
Net price (F.O.B. Factory) $1.65 Ea.

no. 4 HOLLOW PUNCHES

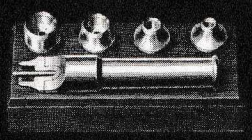
One-piece hollow punches available in following stock sizes:
7/8", 15/16", 1", 1-1/16", 1-1/8", 1-3/16", 1-1/4", 1-5/16", 1-3/8", 1-7/16", 1-1/2", 1-9/16", 1-5/8".

Net Prices F.O.B. Factory

Sizes 7/8" thru 1-3/16"	$6.05 Ea.
Sizes 1-1/4" thru 1-5/8"	7.43 Ea.

Net price, replacement center point and spring only — for any size, $.83 Ea.

changeable handle hollow punches



SET NO. 1

Punch sizes and
Net Prices F.O.B. Factory
3/8" $.83 Ea., 1/2" $1.10 Ea.,
5/8" $1.38 Ea., 3/4" $1.65 Ea.,
7/8" $1.93 Ea.

Net Price, handle only	2.75
Net Price, center point and spring only	.83
Net Price, complete set in wood case	13.20
Weight	2-1/2" lbs.

SET NO. 2

Punch sizes and
Net Prices F.O.B. Factory
1" $3.85 Ea., 1-1/4" $4.13 Ea.,
1-1/2" $4.40 Ea., 1-3/4" $4.68 Ea.,
2" $4.95 Ea.

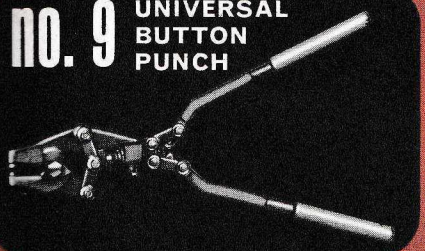
Net Price, handle only	5.78
Net Price, center point and spring only	.83
Net Price, complete set in wood case	33.00
Weight	7-1/2" lbs.

SET NO. 3

Punch sizes and
Net Prices F.O.B. Factory
2-1/4" $6.05 Ea., 2-1/2" $6.33 Ea.,
2-3/4" $6.60 Ea., 3" $7.43 Ea.

Net Price, handle only	5.78
Net Price, center point and spring only	.83
Net Price, complete Set in wood case	38.50
Weight	11-1/2" lbs.

no. 9 UNIVERSAL BUTTON PUNCH



The No. 9 Universal Button Punch is used to indent several thicknesses of metal, forming a 3/8" dia. button or dimple that holds the pieces together securely. A common use is on standing seams on roofs to make a watertight fastening. Head of punch revolves to any position. Ends of jaws are offset at a 30° angle, permitting close corner work and a clear view.

specifications

Capacity, 3 thicknesses of mild steel	20 ga.
Depth of throat	1-3/4"
Height of throat	5/8"
Length overall	26"
Weight	10 lbs.

net prices (F.O.B. Factory)

No. 9 Universal Button Punch	$60.00
No. 9 Punch, for replacement	1.54
No. 9 Die, for replacement	1.54

no. 23 CLIP PUNCH

The No. 23 Clip Punch is an efficient tool for fastening seams, as in duct work. An "ear" is cut and bent out to be hemmed tight with a hammer. Flat-nosed jaws permit access to cramped places. Long handles provide plenty of power.

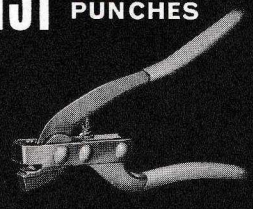
specifications

Capacity, 3 thicknesses of mild steel	24 ga.
Depth of throat	1"
Length overall	21"
Weight	6 lbs.

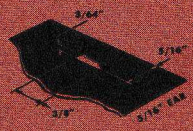
net prices (F.O.B. Factory)

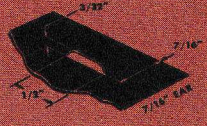
No. 23 Clip Punch	$36.30
No. 23 Punch, for replacement	3.58
No. 23 Die, for replacement	3.03

no. 131 SNAP LOCK PUNCHES



Two sizes: 5/16" and 7/16". Extremely useful tools for installers of ducts, furnaces, and the like. Forms lugs or ears that will lock firmly on the seamed edge of a joining piece. Reduces use of screws, saves time, makes tight joints. Has spring-return jaws.





specifications

Capacity, mild steel	20 ga.
Length overall	8-1/2"
Weight	1 lb.

net prices (F.O.B. Factory)

No. 131-5/16"	$9.35
No. 131-7/16"	9.35

sheet metal hand tools and rivet tools

grooving tools

Used for flattening and offsetting folded edges to make a lock seam. Drop forged, hardened.

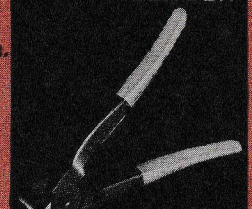
Size, No.	00	0	1	2	3
Size, inches	1/2	7/16	3/8	5/16	1/4
Weight, oz.	18	18	18	18	14
Price	$2.45	$2.45	$2.45	$2.45	$2.20
Size, No.	4	5	6	7	8
Size, inches	7/32	3/16	5/32	9/64	1/8
Weight, oz.	14	14	14	14	14
Price	$2.20	$2.20	$2.20	$2.20	$2.20

Net Prices, F.O.B. Factory.

whitmetal pin & a-1 scratch awl

Whitmetal Pin has 3-3/8" plastic handle, 8-1/16" overall, Wt. 3-1/2 oz., Net $1.49 Ea. (F.O.B. Factory). A-1 Scratch Awl is 9" overall, Wt. 8 oz., Net $1.82 Ea. (F.O.B. Factory). Both tools are drop forged and hardened.

no. 42 HAND BENDER



A heavy duty tool to form heavy gauge metal. 1-3/4" wide jaws permit bending in cramped areas. Throat depth 1/2", overall length 8-1/2", Wt. 1-1/4 lbs., Net $7.98 Ea. (F.O.B. Factory).

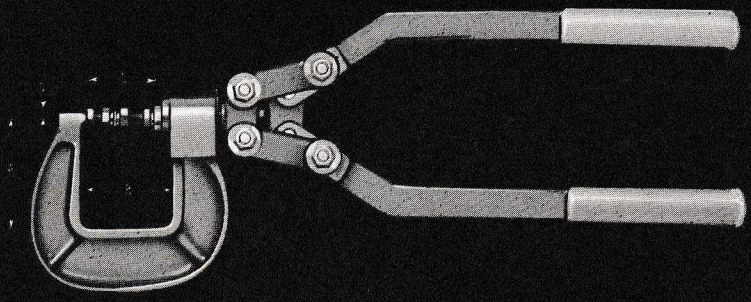
nos. 44, 44r HAND SEAMERS

No. 44R has radius on jaws. Large jaws are machined for smooth parallel fit. Form precise folds and seams. Depth of throat 1", width of jaws 3-1/2", overall length 8", Wt. 1 lb., Net $7.15 Ea. (F.O.B. Factory).

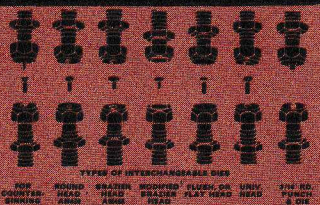
no. 111 PIPE CRIMPER

Quality tool for crimping sheet metal pipe. Main parts are drop forged. Spring return handles. Depth of throat 1-1/8", overall length 9", Wt. 1 lb., Net $9.35 Ea. (F.O.B. Factory).

redi-set RIVET SQUEEZERS



Redi-Set Rivet Squeezers develop 3,500 lbs. of pressure to set any type of aluminum rivet size listed.. Dies are adjustable and interchangeable. The riveting plane may be raised or lowered and the jaws may be revolved to any position. Riveting dies are not furnished with tools. When ordering dies, specify type of head and rivet size. Submit sample rivet when ordering tubular riveting dies.



TYPES OF INTERCHANGEABLE DIES

FLUSH OR FLAT HEAD

UNIV. HEAD

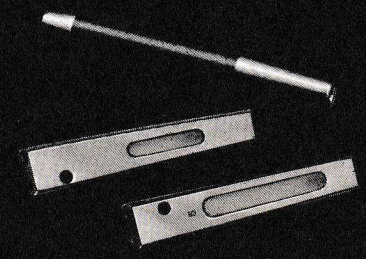
Rivet sizes: 3/32", 1/8", 5/32", 3/16" for Univ. & Rd. Hole types; 3/32", 1/8", 5/32" all others.

specifications and net prices

(F.O.B. Factory)

Style No.	A	B	C	D	Weight	Length Overall	Price Each
DA-1	1-3/4"	2"	1-5/8"	5/16"	6 lbs.	18-1/2"	$49.50
DA-2	2-1/2"	2"	1-5/8"	5/16"	6-1/2 lbs.	18-1/2"	55.00
DA-5	6"	2"	1-5/8"	5/16"	9 lbs.	18-1/2"	60.50
DA-8	8"	2"	1-5/8"	5/16"	16-1/2 lbs.	18-1/2"	75.00
DA-10	10"	2"	1-5/8"	5/16"	32 lbs.	18-1/2"	98.00
Handle assembly only					4-1/2 lbs.	14-1/2"	35.75
Riveting Dies, per set (be sure to mention type of rivet head)							4.18
Countersinking Dies, per set (state angle of rivet head) 78° or 100°							10.23
Tubular Riveting Dies, per set (submit sample rivets with order)							7.15
Round Punch and Die, per set							7.15

hand forming rivet sets



Sets are hardened with polished riveting head surfaces.

specifications & net prices

(F.O.B. Factory)

ROUND TYPE

Size: 3/32", 1/8", 5/32", 3/16", 1/4"
Type of Head: Brazier, Mod. Brazier, Round
Length 4-7/8", Dia. 5/8", Wt. 6 oz.
Price $1.98 Ea.
When ordering, specify type of rivet head.

RECTANGULAR TYPE

Size	Hole Size Inches	Iron Rivets Lbs.	Copper Rivets Nos.	Wt.	Price Each
00	.3125	14 & 16	—	14 oz.	$2.75
0	.2812	10 & 12	5	14 oz.	2.75
1	.2343	7 & 8	6	10 oz.	2.20
2	.2130	6	7	10 oz.	2.20
3	.1910	4 & 5	8	10 oz.	1.93
4	.1660	3 & 3-1/2	9	6 oz.	1.93
5	.1495	2 & 2-1/2	10 & 11	6 oz.	1.65
6	.1405	1-1/2 & 1-3/4	12	6 oz.	1.65
7	.1285	1 & 1-1/4	13 & 14	4 oz.	1.65
8	.1100	10 & 12-oz.	15	4 oz.	1.65

export sales

ADOLPH STERN
Pan American Trade Development Corp.
2 Park Ave. New York, New York 10016
Colombia, Venezuela

JOSEPH F. DeMAY
J. H. O'Callaghan, Inc.
28 Water St. New York, New York 10004
Union of South Africa

FRANK HAMPSON
James H. Vickery Co., Ltd.
Vulcan Works,
Harrison Street
Manchester 4, England
British Isles

JULIUS V. CREMONIN
Export Department
Roper Whitney, Inc.
Suite 606, 11 Broadway
New York, New York 10004
All Other Countries

ordering information

Minimum charge order $3.00.

TERMS: All prices net, f.o.b. factory.

CASH DISCOUNTS: 1% 10th and 25 Prox., net 30.

WEIGHTS: All weights listed are shipping weights.

DELIVERY: Stock items — normal shipment 2 days, subject to prior sale. Non-Stock items — contact factory for delivery schedule.

CLAIMS: All claims for shortages must be made 10 days after receipt of invoice.

QUOTATIONS: Phone quotations will not be firm. All quotations must be in writing.

ORDERING RULES: BEFORE PLACING AN ORDER, BE SURE TO OBSERVE FOLLOWING RULES TO SAVE TIME AND COST OF PHONE CALLS OR CORRESPONDENCE.

PUNCHING TOOLS . . . (1) Thickness of material. (2) Type of material. (3) Location of hole in material.

SHEARING TOOLS . . . (1) Thickness of material. (2) Width of material. (3) Length of material. (4) Type of material.

PUNCHES OR DIES . . . (1) Thickness of material. (2) Type of material. (3) Tool to be used.

PARTS . . . The number of the tool.

SHIPPING INSTRUCTIONS . . . Be sure to advise method of shipping. All orders will be shipped U.P.S., P.P. or Mtr. Frt. unless otherwise indicated.

RETURN MERCHANDISE POLICY: The following is Roper Whitney, Inc. policy on merchandise returned.

(1) Merchandise returned will not be accepted without prior written authorization.

(2) Merchandise will not be accepted if the merchandise is not properly packed.

(3) Credit will not be allowed on merchandise that has been used or has been damaged as outlined in our Standard Warranty and subject to our inspection.

(4) All shipments to Roper Whitney, Inc. must be shipped prepaid unless prior written authorization has been issued.

(5) A re-stocking charge on returned merchandise with an invoice value of the following: Under $50.00 will be 20%, over $50.00 will be 10% of the invoice value.

(6) Tools and machines returned to the factory for repairs will be accepted without prior written notice. However, repairs will not be made without receipt of formal purchase order. If the tool or machine will require extensive repairs, the factory will notify the customer of the approximate cost of such repairs. Authorization for the repairs must be received by the factory before the necessary repairs will be made. Minor repairs will be made by the factory without notification to the customer.

warranty

Roper Whitney, Inc. tools are guaranteed against defects in material and workmanship. If a part breaks within one year because of defects in the material or poor workmanship, it will be replaced free of charge. This does not apply to perishable tooling. Perishable tooling life depends on the use and care.

Perishable tooling warranted to be free of defects in material and workmanship.

We assume no responsibility for damages for repairs when the work or replacement parts are not Roper Whitney's genuine replacement parts, or work that has not been authorized by Roper Whitney, Inc.

PRICES AND PRODUCTS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE

ROPER WHITNEY, INC. (formerly Whitney Metal Tool Co.)
2833 Huffman Blvd., Rockford, Illinois 61101
Area 815/962-3011 Telex 25-7465

SUBSIDIARY OF
ROPER INDUSTRIES, INC.

catalog 70a

ROPER WHITNEY, INC.

Formerly Whitney Metal Tool Co.
2833 Huffman Blvd.
Rockford, Illinois 61101
Area: 815/962-3011 Telex: 25-7465

SUBSIDIARY OF
ROPER INDUSTRIES, INC.

Litho in U.S.A.